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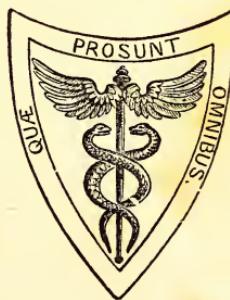
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THE
AMERICAN JOURNAL
OF THE
MEDICAL SCIENCES.

EDITED BY
ISAAC HAYS, M.D.,
SURGEON TO WILLS HOSPITAL,
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MEMBER OF THE AMERICAN PHILOSOPHICAL SOCIETY, OF THE
ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA,
&c. &c. &c.

NEW SERIES.

VOL. X.



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1845.

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TO READERS AND CORRESPONDENTS.

We have received from Dr. G. Buck, of New York, an account of his successful operation for ankylosis of the knee-joint, which shall appear in our next number, illustrated with drawings.

The following works have been received:—

Essays on Pathology and Therapeutics, being the substance of the course of lectures delivered by Samuel Henry Dickson, M. D., Prof. of the Inst. and Pract. of Med. in the Med. Coll. of the State of South Carolina, Charleston, 1845. (From the author.)

Mental Maladies. A Treatise on Insanity. By E. Esquirol, Physician in Chief to the Maison Royale des aliénés de Charenton, &c. &c. Translated from the French, with additions. By E. K. Hunt, M.D. Philada., Lea & Blanchard, 1845. (From the publishers.)

The Principles and Practice of Dental Surgery. By Chapin A. Harris, M. D., D. D. S., Prof. of Practical Dentistry and Dental Pathology in the Baltimore College of Dental Surgery. Illustrated with sixty-nine wood engravings. Philadelphia, Lindsay & Blakiston, 1845. (From the publishers.)

A Synopsis of the Symptoms, Diagnosis and Treatment of the more Common and Important Diseases of the Skin. With sixty coloured figures. By B. N. Worcester, M. D., Prof. of Physical Diagnosis and General Pathology in the Med. School of Cleveland. Philada., Thomas Cowperthwaite & Co., 1845. (From the author.)

On the Anatomy and Diseases of the Sexual Organs. Containing the Anatomy of the Bladder and of the Urethra, and the treatment of the obstructions to which these passages are liable. By G. J. Guthrie, F. R. S., Surgeon to the Westminster Hospital, &c. From the third London Edition. Philada., 1845. (From the publishers.)

Sixteenth Annual Report of the Inspectors of the Eastern State Penitentiary of Pennsylvania. Philada., 1845. (From Drs. Hartshorne & Given.)

Transactions of the New York State Medical Society. Vol. VI. Part II. (From the Society.)

Fifty-eighth Annual Report of the Regents of the University of New York. Albany, 1845. (From Dr. T. R. Beck.)

A Dictionary of Practical Medicine. Comprising General Pathology, the Nature and Treatment of Diseases, Morbid Structures, &c. By James Copland, M. D., F. R. S. Edited, with additions. By Charles A. Lee, M. D. New York, Harper & Brothers, 1845. Parts VII, VIII and IX. (From the publishers.)

Catalogue of Students for 1844-5, and annual announcement for 1845-6 of the Medical College of Ohio. Cincinnati, 1845. (From the Faculty.)

Tobacco as a Medicine and a poison. By N. V. Bailey, M. D. Charleston, 1844. (From the author.)

Every man his own Farrier, containing the Causes, Symptoms, and most approved methods of Cure of the Diseases of Horses. By Francis Clater, and his son John Clater. First American from the twenty-eighth London Edition. With notes and additions by J. S. Skinner. Philada., Lea & Blanchard, 1845. (From the publishers.)

Manual of Orthopedic Surgery, being a dissertation which obtained the Boylston Prize for 1844, on the following question: "In what cases and to what extent is the division of Muscles, Tendons, or other parts proper for the relief of deformity or lameness?" By Henry Jacob Bigelow, M. D. Boston, W. D. Ticknor, 1845. (From the author.)

Principles and Illustrations of Pathological Anatomy; being a complete series of coloured lithographic drawings. By J. Hope, M. D., F. R. S., &c. First American Edition. Edited by L. M. Lawson, M. D., Prof. of Gen. and Path. Anat. and Physiology in Transylvania University. Cincinnati and Lexington, 1844. (From the editor.)

Summary of the Transactions of the College of Physicians of Philadelphia, from 1844 to March 1845. (From the college.)

An Inaugural Dissertation on the Sympathies of the System. By W. Mosely Fitch. Charleston, S. C., 1845. (From the author.)

Accidents: Popular directions for their immediate treatment; with observations on Poisons and their antidotes. By Henry Wheaton Rivers, M. D., Surgeon to the U. S. Marine Hospital, Providence, R. I. Boston and Providence, 1845. (From the author.)

Annual Circular and Catalogue of the Officers and Students of Laporte University. Session 1844-5 Chicago, 1845. (From Prof. A. B. Shipman.)

Proceedings of the Medical Society of the State of Tennessee at their Annual Meeting held in the City Hall, Nashville, May 1845. Nashville, 1845. (From the Society.)

The Edinburgh Medical and Surgical Journal: April 1845. (In exchange.)

The Medico-Chirurgical Review, and Journal of Practical Medicine: April 1845. (In exchange.)

The British and Foreign Medical Review, or Quarterly Journal of Practical Medicine and Surgery: April 1845. (In exchange.)

Guy's Hospital Reports: April, 1845. (In exchange.)

London Medical Gazette: March, April, May, 1845. (In exchange.)

The Provincial Medical and Surgical Journal: March, April and May, 1845. (In exchange.)

The Medical Times: March, April and May, 1845. (In exchange.)

The Northern Journal of Medicine. Edited by William Seller, M. D., &c. &c., March, April and May, 1845. (In exchange.)

The London and Edinburgh Monthly Journal of Medical Science. Edited by John Rose Cormack, M. D., &c. April, May, 1845. (In exchange.)

Annales Medico-Psychologiques. Journal de l'Anatomie de la Physiologie et de la Pathologie du Système Nerveux. Tomes i, ii, iii, and Nos., for July, Sept., and Nov., 1844, and Jan., 1845. Vol. iv. (In exchange.)

Gazette Médicale de Paris: Nos. 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, for 1844. Nos. 1, 2, 4, for 1845. (In exchange.)

L'Expérience, Journal de Médecine et de Chirurgie: Nos. 372, 373, 374, 375, 377, 378, 379, 381, 382, 383. (In exchange.)

- Revue Médicale: Aug., Sept., Oct., Nov., Dec., 1844. (In exchange.)
 Journal des Connaissances Medico-Chirurgicales: Sept., Oct., Nov., Dec., 1844.
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 Journal de Médecine et de Chirurgie Pratiques: Sept., Oct., Nov., Dec., 1844.
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 Annales de Thérapeutique Médicale et Chirurgicale et de Toxicologie. Publiées
 par M. le Docteur Rognetta. Oct., Nov., Dec., 1844. Jan., 1845. (In exchange.)
 Journal de Pharmacie et de Chémie: Sept., Oct., Nov., Dec., 1844; Jan., 1845.
 (In exchange.)
 Journal des Connaissances Médicales Pratiques Revue de Pathologie et de Thé-
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 Journal de Médecine. Par M. Troussseau: March, April and May, 1845. (In
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 Journal de Chirurgie Par M. Malgaigne: March, April, 1845. (In exchange.)
 The New York Journal of Medicine and the Collateral Sciences: March, May,
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 Southern Medical and Surgical Journal: April, June, 1845. (In exchange.)
 Illinois Medical and Surgical Journal: March, April, 1845. (In exchange.)
 The Bulletin of Medical Science: April, May, 1845. (In exchange.)
 Journal of Health: March, April, 1845. (In exchange.)
 Boston Medical and Surgical Journal: April, May, 1845. (In exchange.)
 The Saint Louis Medical and Surgical Journal: March and June, 1845. (In
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 The Medical Examiner and Record of Medical Science: April, May, June, 1845.
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 The American Journal of Insanity: April, 1845. (In exchange.)
 The American Journal of Science and Arts. Conducted by Prof. Silliman and
 B. Silliman, Jr.: April, 1845. (In exchange.)
 The American Journal and Library of Dental Science: March, 1845. (In ex-
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 Select Medical Library. Christison on Poisons: April, 1845. (In exchange.)
 The British and American Journal of Medical and Physical Science. Edited
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 The Western Journal of Medicine and Surgery: April, May, 1845. (In ex-
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 Journal of Prison Discipline and Philanthropy. Published under the direction
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 The New Orleans Journal, devoted to the cultivation of Medicine and the Asso-
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Communications intended for publication, and Books for Review, should be
 sent, *free of expense*, directed to ISAAC HAYS, M. D., Editor of the Amer. Journ. of
 Med. Sci., care of Messrs. Lea & Blanchard, Philadelphia. Parcels directed as
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Covent Garden, *London*; or to Wiley & Putnam, *New York*; or W. D. Ticknor, *Boston*; or M. Hector Bossange, Lib. quai Voltaire, No. 11, *Paris*, will reach us safely. We particularly request the attention of our foreign correspondents to the above, as we are often subjected to unnecessary expense for postage and carriage.

All remittances of money, and letters on the *business* of the Journal, should be addressed *exclusively* to the publishers, Messrs. Lea & Blanchard.

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ARTICLE I.—*Table showing the Mortality following the operation of Tying the Subclavian Artery.* By GEORGE W. NORRIS, M. D., one of the Surgeons of the Pennsylvania Hospital.

THE subjects of aneurism and of hemorrhage are of the highest interest and importance, and are justly pointed to by the surgeon, as well to show the proficiency of his art, as the benefits conferred by it upon the human family. Notwithstanding, however, the great improvements made in the surgical treatment of these affections, the mortality attendant upon the tying of large vessels is still great. Of one hundred and seventy-one cases of ligature of the larger arteries, operated on by Hunter's method and furnished by Mr. Phillips, fifty-seven, or one in three, proved unsuccessful; and of these, all but two are stated to have died in consequence of the operation. Upon looking over a table of cases which I possess, where the subclavian was the seat of operation, I find that the mortality, following the Hunterian method upon it, is even greater than has been asserted by Mr. Phillips.

The table includes sixty-nine cases—nearly all, I think, that have been recorded—and embraces those in which the ligature was applied below the clavicle, as well as those in which the artery was exposed within the scaleni muscles, either for the arrest of hemorrhage, or for the cure of disease.

No.	Surgeon.	Sex.	Age	Right or left side.	Disease.	Duration of disease.	Ligature separated.
1*	Keste	Male	25		Aneurism		
2	Ramsden	Male	32	Right side	Aneurism	4 months	
3	W. Blizzard	Old			Aneurism		
4†	Colles	Male	33	Right side	Aneurism	2 months	
5	Colles	Male	43	Right side	Aneurism	6 weeks	
6	Chamberlaine	Male	25	Left side	Aneurism from wound	3 months	13th day
7	T. Blizzard	Male	47	Left side	Aneurism	1 month	
8	Post	Male	27	Left side	Aneurism	3 weeks	18th day
9	Wells	Male	61	Right side	Aneurism	7 months	22d day
10	Dupuytren	Male	37	Left side	Aneurism	7 years	15th day
11	Liston	Male	35	Left side	Aneurism	5 months	12th day
12	Mayo	Male	38	Left side	Aneurism	4 months	
13	Todd	Male	35	Right side	Aneurism	4 months	12th day
14	Key				Aneurism		
15	Gibbs	Male	35		Aneurism		12th day
16	Travers	Male	73		Aneurism		1
17	Baroni				Wounded axillary	Some days after	
18	Brodie	Male	56	Left side	Aneurism	2 months	
19	Bullen	Male	60	Right side	Aneurism	4 months	19th day
20	Key	Male	36	Right side	Aneurism	6 weeks	12th day
21	Galtié	Male			Hemorrhage following compound fracture of superior end of humerus		
22	Wishart	Male	47	Left side	Aneurism	3 weeks	16th day
23	Arendt	Male	30	Right side	Aneurism	1 month	16th day
24	Liston	Male	43	Right side	Aneurism	9 months	
25	Thorpe	Male	36	Right side	Aneurism	14 months	13th day
26	B. Cooper	Male	38	Right side	Aneurism	3 months	
27	Gibson	Male	35	Left side	Ruptured axillary, from attempts to reduce a luxation	2 days	
28	Balardini	Female	50	Right side	Aneurism	3 months	16th day
29	Dupuytren	Male	40	Right side	Aneurism		
30	Porter	Male	40	Left side	Aneurism	9 days	17th day
31	Baker	Female	18	Right side	Tumour around head of humerus mistaken for aneurism		
32	Crossing	Male	46	Right side	Aneurism	13 weeks	85th day
33	Mott	Male	28	Right side	Aneurism	7 weeks	15th day
34	Bland	Male	63	Right side	Aneurism		43d day
35	Buchanan	Male	55	Right side	Secondary hemorrhage after amputation		

* The ligature was here placed below the clavicle.

† The ligature was here placed internally to the scalenus muscle.

Date of Operation.	Result.	Period of death.	Cause of death.	Work.
March, 1800	Cured			London Med. Rev., vol. vi., 1801.
Nov. 9th, 1809	Died	5th day	Irritation from sloughing of tumour.	Practical Observations.
1811	Died	4th day	Not stated.	Hodgson on the Arteries.
Oct. 10th, 1811	Died	4th day	Hemorrhage.	Edinburgh Med. and Surg. Journ., vol. xi.
July 16th, 1813	Died	3d day	Mortification of limb.	Edinburgh Med. and Surg. Journ., vol. xi.
Jan. 17th, 1815	Cured			Med. Chirurg. Transacts., vol. ix.
Jan. 10th, 1815	Died		Gangrene of hand and arm.	Hodgson on the Arteries.
Sept. 8th, 1817	Cured	8th day		Med. Chirurg. Transacts., vol. ix.
April 12th, 1818	Cured			Amer. Journ. of Med. Sci., vols. iii. and xiii.
March 7th, 1819	Cured			Edinburgh Med. and Surg. Journ., vols. xv. & xvi.
April 3d, 1820	Cured			Edinburgh Med. and Surg. Journ., vol. xvi.
March 19th, 1821	Died	12th day	Inflammation of sac and pleura; had hemorrhage on the 8th, 9th, 10th and 11th days after operation.	Med. Chirurg. Transacts., vol. xii.
Feb. 8th, 1822	Cured			Dublin Hospital Reports, vol. iii.
1822	Died	7th day	Inflammation of sac, pleura and pericardium.	Med. Chirurg. Transacts., vol. xiii.
Jan. 5th, 1823	Cured			Med. Chirurg. Transacts., vol. xii.
Jan. 17th, 1823	Died	3d day	Inflammation of cavity of chest.	Med. Chirurg. Rev., vol. vii.
Jan. 17th, 1823	Cured			Gazette Médicale, No. xliv., 1835.
March 7th, 1823	Died	6th day	Gangrene.	London Med. and Phys. Journ., vol. ii., New Series, 1827.
April 3d, 1823	Cured			London Med. Repository, vol. xx.
Sept. 20th, 1823	Cured			Med. Chirurg. Transacts., vol. xiii.
1823	Died	3d day	Exhaustion.	Chir. Clin. of Delpach, tom. i.
August 23d, 1823	Cured			
June 6th, 1826	Cured			Edinburgh Med. and Surg. Journ., vol. xxi.
Sept. 14th, 1826	Died	14th day	Hemorrhage.	London Med. and Phys. Journ., vol. ii. N. S.
June 21st, 1827	Cured			Edinburgh Med. and Surg. Journ., vol. xxvii.
Dec. 4th, 1827	Died	2 months after	Sloughing of the sac.	Amer. Journ. of Med. Sci., vol. ii., 1828.
March 17th, 1828	Died	8th day	Gangrene of hand and forearm.	Amer. Journ. of Med. Sci., vol. ii., 1828.
Nov. 4th, 1828	Died	about 1 mo. after	Suppuration of tumour.	Gazette Médicale, April, 1841.
June 12th, 1829	Died	7th day		Lancet, vol. ii., 1833-34.
June 27th, 1829	Cured			Dublin Hospital Reports, vol. v.
1829	Died			Lancet, vol. ii., 1828-29.
June 23d, 1830	Cured			
August 30th, 1830	Cured			Med. Chirurg. Transacts., vol. xvi.
Dec. 17th, 1830	Cured			Amer. Journ. of Med. Sci., vol. vii.
May 1st, 1830	Died	4th day	Gangrene of stump.	Amer. Journ. of Med. Sc., vol. ix.
				Glasgow Journal, vol. iii.

No.	Surgeon.	Sex.	Age	Right or left side.	Disease.	Duration of disease.	Ligature separated.
36	Mayo	Male	49	Left side	Aneurism	1 month	18th day
37	Fergusson	Male	60	Right side	Aneurism	2 years	31st day
38*	Mott	Female	21	Right side	Aneurism	A year or two	
39	Porter	Male	63	Left side	Aneurism	5 weeks	
40	Brodie	Male	56	Right side	Aneurism	11 weeks	17th day
41	Lallemand	Male		Right side	Wounded axillary	1 day	12th day
42	Auchinloss	Male	65	Left side	Aneurism	18 months	
43	Nicol	Male	68	Left side	Medullary Sarcoma considered aneurismal	13 months	
44	Nichols	Female	21	Left side	Aneurism		21st day
45	Segond	Female	40		Aneurism from wound	6 days	11th day
46	Lizars	Female	42	Left side	Aneurism	10 years	
47†	Blasius	Male			Wounded axillary	20th day	
48	Haspel	Male			Wounded axillary	Immediately after	
49	Hobart	Male	38	Right side	Aneurism	4 months	22d day
50	Earle	Male		Left side	Supposed aneurism		16th day
51*	Hayden	Female	57	Right side	Aneurism	10 months	
52†	Catanoso	Male	33	Right side	Wounded axillary	14 days	
53	Suetin	Male	44	Left side	Aneurism		20th day
54*	O'Reilly	Male	39		Aneurism		
55	Montanini	Male	21	Right side	Aneurism from wound	16 days	13th day
56	Rigaud	Male	31	Right side	Aneurism		13th day
57	Jobert	Male	61	Right side	Aneurism	6 months	
58	Syme	Male	23	Left side	Aneurism from ruptured axillary	1 month	
59	White	Male		Left side	Aneurism from wound	2 weeks	17th day
60	Nott	Male	30		Aneurism from wound	3 months	31st day
61	Skey	Male		Left side	Aneurism	2 months	47th day
62	Hulton	Male	35		Aneurism	3 months	12th day
63	Gross	Male	36	Right side	Aneurism	18 months	14th day
64*	Partridge	Male	38	Right side	Aneurism	12 months	
65	B. Cooper	Male	50	Left side	Aneurism	6 weeks	
66	Hutin	Male	26		Wounded axillary	12 days	
67	McDougall	Male	24	Left side	Aneurism from gun-shot	6 weeks	
68	Mott	Male	35		Aneurism from gun-shot	22 days	15th day
69	A. C. Post	Male	37	Right side	Hemorrhage after amputation		27th day

* The ligature was here placed internally to the scalenus muscle.

† The ligature was here placed below the clavicle.

Date of Operation.	Result.	Period of death.	Cause of death.	Work.
March 26, 1831	Cured			Med. Chirurg. Transacts., vol. xvi.
May 12th, 1831	Cured			Edinburgh Med. and Surg. Journ., vol. xxxvi.
Sept. 22d, 1831	Died	18th day	Hemorrhage.	Amer. Journ. of Med. Sci., vol. xii.
Dec. 31st, 1831	Cured			Dublin Journal, vol. i.
Dec. 13th, 1831	Died	6th day	Inflammation.	London Medical Gazette, vol. ix.
Feb. 19th, 1833	Cured			Archives Générales, vol. xxxvii.
July 23d, 1833	Died	3d day	Effusion on brain.	Edinburgh Med. and Surg. Journ., vol. xlv.
Jan. 16, 1834	Died	25th day	Hemorrhage.	Edinburgh Med. and Surg. Journ., vol. xlii.
April 30th, 1833	Cured			Amer. Journ. of Med. Sci., vol. xii.
April 5th, 1834	Cured			Journal Hebdomadaire, tom. i. 1835.
April 27th, 1834	Cured			Lancet, vol. ii., 1833-34.
1834	Died	2d day		Med. Chirurg. Rev., vol. xx.
Feb. 4th, 1835	Died	After some days	Mortification of arm.	Gazette des Hopitaux, 1839, p. 186.
May 7th, 1835	Cured			Edinburgh Med. and Surg. Journ., vol. xlvi.
April 14th, 1835	Supposed cure			Amer. Journ. of Med. Sci., vol. xviii.
Sept. 15th, 1835	Died	12th day	Hemorrhage.	Amer. Journ. of Med. Sci., vol. xxi., 1837.
September, 1835	Cured			Amer. Journ. of Med. Sci., vol. xx., and Ann. de Chirurgie.
1835	Died	33d day		Med. Chirurg. Rev., vol. xxii.
April 16th, 1836	Died	13th day	Hemorrhage.	Amer. Journ. of Med. Sci., vol. xxi., 1838.
June 28th, 1836	Cured			Gazette Médicale, vol. v., 1-37.
1836	Died	6 weeks after	Suppuration of tumour.	Archives Générales, vol. xlii.
Nov. 22, 1837	Died	29th day	Hemorrhage.	L'Expérience, vol. i.. 1838.
Oct. 24th, 1837	Cured after amputation at shoulder-joint, made necessary in consequence of return of hemorrhage.			Edinburgh Med. and Surg. Journ., vol. i.
Sept. 17th, 1838	Cured			
Nov. 27th, 1838	Cured			Amer. Journ. of Med. Sci., vol. xxiii.
1840	Cured			Amer. Journ. of Med. Sci., vol. ii., N. S., 1841.
Jan. 8th, 1841	Cured			Lancet, vol. ii., 1840-41.
Feb. 18th, 1841	Died	31st day	Tumour burst into cavity of chest.	Lancet, vol. ii., 1840-41.
Feb. 20th, 1841	Died	4th day	Pericarditis and pleurisy.	Western Journ. Med. and Surg., June. 1841.
May 18th, 1841	Died	15th day	Pleuro-pneumonia; some hemorrhage day of death.	London Med. Gaz., 1841.
1842	Died	10th day	Hemorrhage.	Guy's Hosp. Reports, No. xiii., 1841.
Dec. 12th, 1841	Died	7th day	Hemorrhage.	Gazette Médicale, 1842.
June 11th, 1844	Cured			Maryland Med. and Surg. Journal, vol. ii., Jan., 1841.
Dec. 6th, 1844	Cured			New York Journ. of Med., vol. iv.
				New York Journ. of Med., vol. iv.

Mortality.—Of the sixty-nine cases included in the preceding table, thirty-six recovered, and thirty-three died.

Sex.—Of sixty-six cases in which the sex is noted, fifty-nine were males, and seven females. Of the seven females, six laboured under aneurism, and one presented a tumour around the head of the humerus, which was mistaken for it.

Right or left side.—Of fifty-four cases in which the affected side is mentioned, thirty-one were on the right, and twenty-three on the left side.

Age.—This is given in fifty-nine of the cases, of which number there were under

	-	-	-	20	1
		between 20 and 30		10	
	"	30 and 40		22	
	"	40 and 50		11	
	"	50 and 60		6	
	"	60 and 70		8	
above	-	70		1	

Disease or injury.—Of the sixty-nine cases of operations mentioned in the table—fifty-six were done for the cure of aneurism—nine in consequence of wounds or secondary hemorrhages—one was made necessary in consequence of rupture of the axillary in an attempt to reduce an old luxation, and three were done for diseases supposed to be aneurismal.

Period the ligature separated.—In thirty-five of the cases in which it has been noted the ligature came away; in one, on the eleventh day; in six, on the twelfth; in four, on the thirteenth; in one, on the fourteenth; in three, on the fifteenth; in four, on the sixteenth; in three, on the seventeenth; in two, on the eighteenth; in one, on the nineteenth; in one, on the twentieth; in one, on the twenty-first; in two, on the twenty-second; in one, on the twenty-seventh; in two, on the thirty-first; in one, on the forty-third; in one on the forty-seventh; and in one on the eighty-fifth.

Return of pulsation in the tumour after the application of the ligature.—In three of the sixty-nine cases, pulsation returned in the aneurismal tumour after the operation. In one of these (No. 12) it was discovered thirty hours after the operation, and the patient died after repeated hemorrhages. In the second case (No. 11) it was noticed the day after the operation, and disappeared in two days, the patient recovering, and in the third instance (No. 60) it was observed two days after the operation, and at the end of forty days was still strong, though ultimately the disease was cured.

Hemorrhage after the operation.—With three exceptions, all the cases in which secondary hemorrhage followed the operation, proved fatal. In two of these (Nos. 19 and 52) it occurred before the separation of the ligature, on the sixteenth and nineteenth days, and, in the third case (No. 37) it came on on the fourth and fifth days after the ligature had been cut off.

Bursting of the tumour.—In six cases the tumour is stated to have sup-

purated, and either to have been opened or to have burst externally after the operation. Of these, four were cured (Nos. 8, 30, 37, and 62), and two died. In two of them the suppuration did not occur till about the seventh week after the operation, and both of these did well.

In two of the cases in the table, the *contents of the tumour were discharged through the lungs*, this termination in one case being followed by restoration to health, and in the other by death. The operation in the first of these (No. 19) was done on the 3d of April, and on the 21st, the tumour began to increase, and was evidently suppurating. On the 29th, six or eight ounces of bloody pus were brought up during a paroxysm of coughing, and the tumour suddenly diminished to one-half its size. This latter was punctured, and five ounces of the same kind of matter was discharged, to the great relief of the patient. A cavity could now be distinctly felt between the 1st and 2d ribs at their sternal ends, through which the fluid had passed into the lungs, and there being a free communication, the air passed into the sac whenever he coughed, which distended it, and sometimes escaped by the external opening. The discharge from the outer opening gradually lessened, and at the end of three weeks ceased. His cough slowly wore off, and ninety-two days after the operation the patient was quite well.

In the second of these interesting cases, (No. 63) the operation was done by our countryman Dr. Gross, on the 18th of February. After its performance, the contents of the tumour became solidified, and its volume progressively diminished. On the 15th of March, the patient suffered from fever, and a slight degree of tenderness on the apex of the tumour was observed. On the 16th, he was suddenly seized with intense pain in the chest, which was particularly severe at the base of the right lung, and extended up towards the axilla. The respiration throughout the right lung was bronchial, and there was dullness on percussion over the lower ribs; the aneurismal tumour had suddenly disappeared at the time of the attack. On the 18th, the patient experienced a sensation as if a fluid was passing from the pleuritic cavity into that of the aneurismal tumour, and, upon auscultation, a plashing sound was heard at every inspiration, the noise resembling that produced by shaking water in a closed vessel. On the 20th, he died. Upon dissection, the aneurismal tumour was found to communicate by an aperture, one inch and three quarters in length by an inch and a half in width, with the pleuritic cavity; it was situated between the first and second ribs, and was obviously the result of ulcerative absorption induced by pressure of the tumour. Both ribs were denuded of their periosteum. The right side of the chest contained nearly three quarts of bloody serum, intermixed with laminated clots, and flakes of lymph, the former of which had evidently been lodged originally in the aneurismal sac.

The discharge of the contents of a subclavian or axillary aneurism into the lung is a rare termination of it, and, in connection with the two

cases given, it may be well to notice one somewhat similar, which has been recorded by M. Neret, of Nancy. The patient, aged 38, was admitted into the hospital St. Charles for haemoptysis, and was found to labour under an aneurism of the left subclavian, of the size of a large chestnut, which had existed about eight months. He died a short time after his admission, and on dissection, the aneurism was found communicating with a cavity in the upper part of the lung, of the size of a new-born infant. A case of a similar kind is related in his work on the arteries by Mr. Guthrie.

Cause of death.—Of the sixty-nine cases, thirty-three, or nearly one-half died. Of these, two died from sloughing of the tumour; nine, from hemorrhage coming on at various periods between the fourth and thirty-third days; five from inflammation within the chest; six, from mortification of the extremity; one, from effusion on the brain; one, from exhaustion; one, from inflammation; three, from suppuration of the tumour; and in five cases the cause of death is not given.

Mistakes in diagnosis.—In two of the cases contained in the table, the aneurisms had been mistaken for abscesses, and punctured previous to the operation. In three other cases, malignant tumours about the shoulder were looked upon as aneurisms. The first of these cases (No. 31) was that of a female, aged eighteen, operated upon in the New Castle Infirmary, England. It proved to be a fungus haematodes. It became less in size after ligature of the vessel, but speedily assumed a serious aspect, and soon terminated her existence. The artery was found obliterated for at least one inch. In No. 43, the true nature of the affection was a medullary sarcoma of the upper part of the humerus. In the third of these cases, (No. 50,) the artery was taken up in April, 1835, and the aneurism supposed to be cured. On the 2d of July of the same year, the patient died of dropsy, and on dissection it became evident that no aneurism had ever existed. The tumour was of a dense structure and lying over the artery.

Difficulties of the operation.—These need not here be dwelt upon—every practical surgeon must be aware that at times they must be very great. Our only object at present is to call attention to the fact, that some of the most celebrated operators have failed in their efforts to pass a ligature around the subclavian. In a case at Guy's Hospital, Sir Astley Cooper attempted to tie the vessel above the clavicle. The aneurism was very large, and the clavicle thrust upwards by the tumour so as to make it impossible to pass a ligature under the artery without incurring the risk of including some of the nerves of the axillary plexus. The attempt was therefore abandoned. In a case of large aneurism of the right side, of four years' standing, which occurred to M. Dupuytren, in 1819, he succeeded, as he believed, after one hour and forty-eight minutes, in placing a ligature around the subclavian from above the clavicle. Pulsation in the tumour continued after the operation, which M. Dupuytren stated to have been the most tedious, difficult and painful that he had ever attempted, and after death, which occurred

on the ninth day, the ligature was found knotted loosely on that portion of the fourth cervical, which afterwards becomes the external cutaneous or musculo-cutaneous nerve, and the artery was not included in the ligature.

In the case of a soldier, aged 27, with hemorrhage from the arm-pit resulting from a wound received in a duel, Prof. Lallemand attempted without success to place a ligature upon the subclavian from above the clavicle. The hemorrhage was arrested by ligature of the wounded vessel, and he lived till the following day. In a case of aneurism which occurred to Mr. Cusack, of Dublin, he attempted to place a ligature on the subclavian in its third stage, and in endeavouring to pass it, the aneurism was penetrated. An alarming gush of blood followed, which was arrested by plugging up the wound: the man survived ten days, dying of hemorrhage.

In one case included in our table, (No. 16,) the sac was accidentally punctured by the needle in the attempt to pass it beneath the vessel, and gave rise to "terrific hemorrhage." Even after the ligature was secured, the bleeding was not checked till a sponge tent in the wound, and pressure, were applied.

In No. 11, (which, by the way, was the first successful operation for axillary aneurism in Great Britain,) the inferior nervous band, passing out to form the axillary plexus, was surrounded by the ligature instead of the artery: the mistake, however, was soon discovered; and the ligature, still retained, was used to pull the nerve a little upwards from its situation, so as to admit of the more ready exposure and deligation of the artery.

In cases of great difficulty of passing the ligature around the artery, it has been proposed by Mr. Hargrave and M. Cruveilhier, to saw through, or excise a portion of the clavicle—a procedure we should suppose which would greatly tend to increase the danger of the operation.

ART. II.—*Account of an Epidemic Fever which occurred at North Boston, Erie county, N. Y., during the months of October and November, 1843.* By AUSTIN FLINT, M. D., of Buffalo, N. Y.

In the autumn of 1843 an epidemic fever occurred at North Boston, in this county, distant about eighteen miles from this city. This little town, or rather settlement, is made up of some half-a-dozen houses, located closely together, and contains a population of forty-three persons. Of this number, twenty-eight were seized with fever between October 19th and December 7th. In ten instances the disease proved fatal.

It appears that some feuds existed in this small community; and the idea was conceived that a well from which the families who suffered were accustomed to draw water in common had been poisoned. Great excite-

ment consequently arose in the settlement and neighbourhood. Some of the sick being chargeable upon the county, the superintendents of the poor were desired to send a physician from the city to assist in investigating the nature and origin of the disease. I was employed for this purpose, and visited the place November 5th.

The disease was manifestly an epidemic fever, differing in several striking particulars from the form of fever which prevails in this region (mild remittent or bilious fever). This fact was apparent to the several practitioners in the neighbourhood whom I met on the occasion of my visit. It became, then, a question of much interest whether it was, in reality, our indigenous fever modified by some peculiar circumstances ; or, whether it was to be regarded as a variety of the disease intrinsically different from our common remittent variety. If the former—inquiry would arise as to the circumstances which occasioned the modification ; and if the latter were true, what were its proper nosological place and name ? At all events, the fact of an epidemic fever attacking more than one-half the population of such a little community, in a healthy locality, and presenting a novel aspect, was sufficiently interesting and important to merit investigation.

I was able to devote only about eight hours to personal observations. During this time I made an autopsical examination of the body of a child who had died with the disease ; and took notes at the bedside, of the history of nine cases, with the symptoms presented at the time of my visit. Dr. Camp, a highly esteemed practitioner in the neighbourhood, engaged to keep full records of the remainder of the cases, and to collect as many facts as possible which would have bearing on the investigation. Shortly afterwards, however, he was seized with a renewal of a pulmonary affection, to which he had previously been subject, confining him to his house, which he never again left. Tubercular disease became developed, and he lingered up to March last, when he died. Before being stricken down, he had written a brief history of ten cases, which he placed at my disposal.

The notes taken by myself, and those furnished by the late Dr. Camp, with such information as I have been able to collect from the other medical gentlemen, (Dr. Allen and Dr. Baker,) who were in attendance upon some of the patients, and whom I met in consultation, constitute the materials for an investigation of the character and origin of this epidemic visitation. They have lain by me until the present time, for want of leisure to arrange and write them out. I concluded to do so now, and submit them for publication, because the subjects involved, in addition to their local interest, appear to have, in a general scientific view, some importance. Any facts which may contribute to shed light on the etiology of fever, and the pathological distinctions existing among its various forms, must have interest and importance for those whose reflections have embraced these confessedly most obscure departments of medical research.

The first event to be noticed in an account of this epidemic, was the following, which preceded its appearance:—A young man from Warwick, Mass., on his journey to the west, arrived at Fuller's tavern (where the disease first appeared) Sept. 21st, stating that he was too ill to proceed further, and requesting lodgings until he should recover. He died on the 19th October. He was attended by a Thomsonian practitioner until within six days of his decease, when he was visited by Dr. Allen. It was ascertained that he had been unwell for several days before reaching North Boston, and that diarrhoea was one of the primary symptoms of his ailment. Dr. Allen states, in answer to my inquiry, whether his condition when he saw him resembled that of the cases which occurred afterward, that “he was labouring under the same form of fever that the other patients had, together with a malignant dysentery.” He lapsed into that state usually denominated *typhoid*, as I was verbally informed at my visit, shortly after taking lodgings at Fuller's, and became progressively worse, until he died.

The first patient taken ill after the foregoing event, was a son of Fuller, aged sixteen years. He was attacked on the 14th October, 23 days after the arrival of the stranger. He complained first of pain in the loins, headache, chills. He had diarrhoea at the commencement. He was attended first by Dr. Allen, next by a Thomsonian, and afterward by Dr. Camp. He died Nov. 2d, (18 days.) Dr. Camp states, that he began to attend him 5 days before his death. Found him in a typhoid condition; tongue brown and dry; low muttering delirium; cough and copious expectoration of a muco-purulent character. Not much meteorism of intestines.

The preceding and the following cases are transcribed from notes made at my visit:

A daughter of Fuller, aged 15, was taken very shortly after the son was attacked, or about the same time. Dr. Camp saw her Oct. 29th, 15 days after the attack. Previously to this, she had had no medical attendance, excepting some cathartic prescription from a Thomsonian. The family had given two emetics and infusion of eupatorium freely. This patient has not had chills, but headache, pain in loins, &c. When Dr. C. first saw her, her symptoms were as follows: tongue moist and clean at edges, with a yellowish-white coat in centre, and not distinctly dry; pulse moderately accelerated; thinks there was no distinct exacerbation on that day, and he was present all day; skin was perspirable; no meteorism; some abdominal tenderness on pressure; bowels loose. I cannot ascertain that diarrhoea existed at commencement.

She has remained in a stationary condition up to the present time (Nov. 5th); been very dull and heavy in intellect, but no delirium during the day; much talking in sleep at night; has insisted upon being up and dressed every day, sitting up about one-third of the day; has been thirsty; been accustomed to go to the table and take some food, with regard to which no restraint appears to have been imposed; tongue, of late, more dry than formerly; has perspired of late daily more or less.

Another daughter of Fuller, aged 23, was taken ill on the 26th October.

Had been complaining of debility and general malaise for several days. On the 26th, symptoms were dizziness and headache, pain in loins, and mild diarrhoea. Took an emetic of eupatorium on the 26th. Was visited by a Thomsonian on the 27th. He gave some infusion to check diarrhoea. She had previously taken, of her own accord, cathartics several times. Dr. Camp visited her on the 29th inst. Then the tongue was dry and brown; marked tenderness over epigastrium, with burning sensation there, and moderate tenderness over abdomen; pulse much accelerated and small; skin dry; no perspirations; no distinct delirium, but some affection of intellect indicated by her imagining persons were speaking to her when they were not. About the 31st inst. began to perspire, and symptoms generally improved. Up to present date (Nov. 5th) been progressively improving. At time of writing these notes at the bedside, skin is quite perspirable; tongue moist, coated in some portions; pulse about 80; no appetite; says she gets tolerable sleep.

Another daughter, aged 3 years, was attacked on the 26th Oct. Had not appeared well for ten days previously. Two emetics had been given. Dr. Camp saw her on the 29th, but did not prescribe for two or three days. Tongue somewhat coated, white and moist; skin alternately dry and moist; daily exacerbations; diarrhoea was present in the early part of the disease, and has continued up to this date (Nov. 5th); no abdominal tenderness; moderate meteorism; some cough; thirst urgent; pulse is still rapid; tongue dry for the past few days.

A son of Fuller, aged 8 years. Began to complain on the 19th October. Was restless and feverish at night. Took cathartics, to which diarrhoea succeeded, which continued for ten days. Has had no medical attendance, but has taken eupatorium freely. Cough has been severe, and still continues. Has had perspirations for the last ten days. Appears now feeble, but appetite is good, and bowels regular. The only morbid symptoms are, debility and cough. Is dressed and about the house.

Two cases, in addition to the preceding, occurred in Fuller's family, which proved fatal. The dates of their occurrence, ages, symptoms, &c., I have not the means at hand for ascertaining. One of the preceding cases terminated fatally, but which I am unable to state. Seven cases occurred in this family, (not including the stranger,) and three deaths.

Evi, son of the same Fuller, but married, and living opposite, about four rods from the tavern, aged 21, was attacked Oct. 15th. Had been ailing for a week previous. At access of disease felt chilly, pains in loins, &c. Says he had no headache.

A Thomsonian practitioner saw him on the 16th. Had taken a cathartic a week previous. The Thomsonian who attended him states, that he had diarrhoea when he first saw him, which continued a week pretty severely. Intestines distended with flatus, and some tenderness over abdomen; also some pain in bowels; skin hot and dry; tongue dry, with yellowish coat at first, afterwards dark coloured; some sordes; intellect clear during the day-time, some muttering at night; skin, at times, has been perspirable through his illness; of late, more so, and to-day more than any other day. At time of taking these notes, pulse is much accelerated; skin moist; tongue moist, and thinly coated.

Treatment has been, six emetics, cathartics several times, and astringents. This is the 20th day of the disease. This patient recovered.

The family of Van Hallow reside about eight rods distant from Fuller's. Two cases occurred in this family, both children. They were attended by a Thomsonian :

The first child attacked, aged 7 years, became ill Oct. 16th; for five days previous had not seemed to be well. Had diarrhoea at commencement of a mild character, no cathartics having been administered. Had chills and rigors with pains in bowels. When first seen by the Thomsonian he states that the pulse was very frequent; skin hot and dry; diarrhoea continued; abdomen meteorized; tongue dry and dark; some sordes; low muttering delirium has existed much of the time; picking of the bed-clothes. About ten days after his attendance commenced, she began to perspire occasionally; delirium ceased; tongue improved; has had appetite; bowels are now regular; pulse enumerates 125; skin rather hot, and cheeks flushed. Has had cough, and free mucous expectoration.

Treatment similar to that of last patient. Recovery took place in this case.

The second child, aged 9 years, was attacked Oct. 23d. Been previously ailing for four days. Diarrhoea was severe, at commencement, before any medicine was given. Had chills and slight rigors. Diarrhoea continued for ten days. No perspirations; skin hot and dry; tongue has been dark and dry,—now is moist, and covered with a brown coat; had muttering delirium for one day only; cough and slight expectoration; has complained of pain in bowels and in head. Now pulse 85°. This patient recovered.

This concludes the notes of cases taken by myself at my visit. They were necessarily cursory, owing to restrictions of time. The autopsy occupied all the afternoon after my arrival, and I had only a short time in the evening to visit the patients then sick.

My object in giving these notes is to present, in as far as my materials will permit, facts appertaining to the history of the cases, to serve as data for the practical reader to form an opinion respecting the specific form of fever which existed. I shall now proceed to transcribe brief accounts of ten additional cases, which were furnished by the late Dr. Camp.

The family of Jacob Ingraham reside about three rods from Fuller's tavern. In this family were seven cases, two ending fatally. Dr. Camp recorded an account of four of these cases.

Miel, aged 7 years. Attacked about the middle of October with pains in the head, stomach and back; fever, thirst, slight nausea, &c. Treated by a Thomsonian until the 30th inst., when I first saw him. Symptoms then—delirium; great restlessness; hot dry skin; scanty high-coloured urine; costiveness; tenderness of abdomen, with slight tympanitis; tongue brown and dry, with sordes on lips and teeth; constant moaning; pulse small, frequent, somewhat tense; some spasmodic action of muscles (sub-sultus); great exhaustion; patient did not speak; cough, with tough mucous expectoration.

31st. Symptoms same. Bowels evacuated with ol. ricini, which procured a quantity of hard fecal matter.

Nov. 2d. Constant moaning; tongue still dry, brown coat; skin hot. Has had blister to back of neck. No stool since 31st ult. Ordered infusion of spigelia in conjunction with small doses of calomel and Dover's powder.

3d. Symptoms same. Calomel grs. x, and ol. ricini 3ss, evacuated the bowels and brought away a dozen large worms.

5th. Appears better; slight appetite; no diarrhoea nor perspirations; pulse slower and softer; tongue clean, but still dry. Has not spoken a word since I first saw him.

8th. Perspiration occurred; appetite continues; pulse regular, but feeble; continues restless and moaning; bowels costive.

11th. Swelling near left ear, and a number of boils on different parts of the body.

14th. Punctured abscess near the ear, and evacuated a teaspoonful of good pus. Is slowly convalescing; but has not spoken a word since I first saw him. This patient recovered.

Isaac, aged 9 years. Attacked about the same time, (middle of October,) and treated by the same Thomsonian until the 30th October, when I first saw and took charge of the case. Symptoms of attack similar to preceding case. When I saw him there were the same general restlessness and moaning; slight cough; quick pulse; tongue dry in centre, but moist at edges; perspiration copious upon the face, but nowhere else; some appetite; some stupor; but no delirium.

Nov. 3d. Tympanitis. No evacuations from bowels without laxatives. Sweat continues, and covers the body. Treatment has been tonic.

5th. Skin perspirable; tongue moist; less appetite; slight delirium, with restlessness and moaning.

8th. Skin, tongue and appetite as before. Delirium increased, but not active. Some red spots on face and arms, which disappeared in a few moments, probably caused by irritation.

14th. Improving; rests better; delirium ceased; appetite good; recovered.

Lucy, aged 5 years. Attacked on the 28th October. Had been complaining for three or four days previously. Symptoms were headache, chills, frequent pulse, drowsiness, diarrhoea before taking any medicine. Dr. Baker administered an emetic of ipecac. on the 30th, and followed it with a cathartic of calomel at night.

31st. Tongue dry; skin hot and dry during the febrile stage, but there were evident and very marked remissions, accompanied by free perspirations; slight tenderness of abdomen; no tympanitis. Febrile symptoms continued with rapid prostration until the 9th Nov., when death took place. No opportunity for post-mortem examination.

Narcissa, (an adult, but age not given,) attacked, October 29th, with slight pain in the head. Expected to have been married on that day, had the family not been sick.

31st. Violent pain in head and back, with fever; coated tongue; great thirst; slight delirium; stupor with talking in sleep; diarrhoea succeeding a cathartic which she took on the 30th.

Nov. 2d. Skin hot and dry; suppressed urine; tongue dry and coated; great stupor; thirst. The diarrhœa was suppressed by an anodyne enema.

4th. Tongue somewhat moist; skin still dry; respiration short and difficult; slight tympanitis; dry and hard cough.

7th. Skin became perspirable yesterday, and so continues. Fever has exhibited distinct paroxysms, with marked remissions. Feet have been cold.

9th. Delirium increased, with more restlessness, and less stupor; tongue dry; skin dry in paroxysms, then perspirable during remission; cough and difficulty of breathing increased.

12th. About the same. Delirium continues.

13th. More stupor; great prostration; death in the evening. No post-mortem examination.

Polly (age not stated) was attacked Nov. 8th. Had complained for a week previous of lassitude, pain in stomach, nausea, loss of appetite, slight diarrhœa.

On the 8th, slight chills occurred; tongue dry, with a light coat; diarrhœa increased; pain in head, back and limbs; increased pain in stomach and bowels; tympanitis. Had drank freely of "white lye" during the previous week, and taken a dose of cathartic pills. Skin dry.

Blistered the abdomen, prescribed diaphoretics and mercurial alternatives on the 9th.

14th. Diarrhœa has ceased; respiration laborious; tongue brown, dry and swollen; countenance haggard; muttering delirium; great thirst; sharp, quick pulse; prostration. Treatment, stimulant and diaphoretic—quinine, carb. ammonia, camphor, &c.

The notes of this case terminate here. The patient recovered.

The family of Hallick reside about ten rods from Fuller's. Seven cases occurred in this family, of which five proved fatal.

Dr. Camp recorded notes of but two cases.

Hannah, aged 16. Attacked October 28th. Had diarrhoea for several days; headache, pain in back, with chills, &c. Pulse accelerated; tongue dry, with brown coat; sordes, &c.; cough, with mucous expectoration; delirium early, but cannot state on what day. Fever remitting, alternating with perspirations.

Treated by Dr. Allen, with calomel, Dover's powder, blisters, fetid gums; and in the last stage, carb. ammonia. Death occurred on the 9th Nov. No examination.

Abigail, aged 14. Attacked about the 8th November. First complained of great lassitude and prostration. Tympanitis existed several days before she was taken down. Diarrhoea was present. Pulse at time of attack was quick; skin dry; tongue dry, swollen and brown; slight remissions of fever on some days, and fever not as active as some of the other cases. She continued for several days with no material alteration, gradually sinking until the night of the 14th, when she died.

There was an ineffectual effort made in this case to produce ptyalism in the first instance; and the subsequent treatment consisted of tonics and stimulants. Diarrhoea constantly attended; and no perspirations occurred.

Slight pulmonary affection existed; and almost constant delirium for the last three days.

The family of Dobbs resides about three rods from Fuller's. Four cases occurred in this family, without any deaths.

Dr. Camp's notes embrace an account of three of the cases.

Adeline, aged one year. First saw this patient on the 29th October. Could get no satisfactory history of the previous symptoms. Had been sick about two weeks, and been treated by a Thomsonian. Found her with frequent, small pulse; dry, hot skin; tenderness of epigastrium; costiveness; dry and furred tongue; sordes on teeth and lips; sore mouth and fauces; scanty urine; picking bed-clothes, and constant sliding towards foot of bed; thirst; restlessness; no tympanitis; no eruption; cough; hurried respiration; dilated pupils. Treatment: mucilaginous drinks; blister to back of neck; cathartic of rhei and sodæ; ext. stramonium every four hours; lotion of cold vinegar and water to head; frequent ablutions of body with mild suds.

30th. Rhei had procured two evacuations of offensive fecal matter. Blister vesicated well; pulse less frequent, with more fullness; thirst diminished; skin softer.

Nov. 1st. Continues better. Directed infusion of ipecac., cardamom and rud. liquorice, and continued the ext. stramonium.

3d. Perspiration occurred for the first time yesterday; point and edges of tongue begin to clean; picking bed-clothes ceased; pulse less frequent.

4th. Crust from tongue and lips come off; perspiration continues; no diarrhoea; bowels moved by enema.

8th. No fever; bowels costive; tongue becoming clean; some appetite.

14th. Tongue clean; good appetite; strength returns slowly; cough has increased since the 8th. This patient recovered.

Sarah, aged 9 years. Attacked Nov. 1st with chills, pain in head, back and limbs; diarrhoea; tympanitis; slight abdominal tenderness; pulse accelerated; slight cough; moist, furred tongue; hot, dry skin. She took 20 grs. calomel, with 1½ opii, at night, which proved cathartic on the next morning.

Nov. 2d. She drank freely of infusion of ipecac., cardamom and rud. liquorice, which produced copious perspiration. On the 3d inst. she was running about the house.

Hannah, aged 11. Attacked on the 8th Nov. with violent pain in head; furred tongue; slight diarrhoea; slight chills; pulse somewhat accelerated; some tympanitis without abdominal tenderness; heat of skin. Dr. Baker attended until the 14th inst., when I saw her again. Tympanitis had then subsided; diarrhea ceased; tongue somewhat swollen, dry in centre, and covered with a dark-brown fur; pulse still frequent; fever remits daily, and perspiration occurs; no delirium. This patient recovered.

This concludes the notes furnished by Dr. Camp. Of the remaining ten cases, (the majority of which were fatal cases,) I only know from verbal communication with the attending physicians, that, in their general features they resembled closely those of which some account was recorded. Had Dr. Camp's health permitted, the records furnished by him would have been much more complete, as well as more numerous.

The following is the record of the appearances, found at the autopsy which I performed at my visit. The record was made at the time by Dr. Rogers, of this city, then my pupil.

The subject was a child, aged (as near as my recollection serves) about 12 years.

Autopsy eighteen hours after death; chest was first examined. No effusion into pleural or pericardial cavities. Lower lobe of right lung presented dark colour; and minute spots of purulent-looking matter followed incisions. No tubercles or granulations. Lower lobe of left lung also presented minute points of purulent matter, confined to inferior portion of lobe.

Heart. Right ventricle contained small portion of coagulated lymph; left ventricle, some fluid blood. Appearance of both ventricles natural. In the right auricle there were some lymph and some bloody liquid.

Liver. Somewhat enlarged, and portions presented a marbled appearance. Aspect on incision healthy. Gall-bladder somewhat distended.

Stomach. Internal surface presented no traces of inflammation, nor lesions of any kind.

Intestines. Upper portions empty; colon somewhat distended with gas. Several invaginations (progressive) were discovered: One, 4 inches from duodenum, an inch and a half, easily withdrawn; a second, same length and character, along the ileum; a third, do., three and a half inches in length; a fourth, do., one and a half inches; a fifth, do., one inch; a sixth, do., three and a half inches. Mesentery of lower ileum reddened; mesenteric glands enlarged; the range nearest the intestine about the size of peas; some of those nearest spine nearly as large as a hickory-nut, one quite as large. On pressing the larger glands after incision, portions of dark bloody points were produced. Mucous membrane of superior portion of small intestine covered with a yellowish matter; the inferior portion was thickly covered with a greenish-yellow matter of the consistence of jelly.

An ulceration of the size of a shilling piece was discovered about six inches above the cæcum; fourteen other ulcerations found along the lower third of the ileum. The upper ulcerations were of an oval form. Above the ulcerations the elliptical patches were thickened. The ulcerations corresponded with the enlarged mesenteric glands.

Upper third of intestine presented healthy appearance.

Pancreas healthy.

Spleen, (by some oversight which I am at a loss to account for,) is not mentioned, and its condition is not recollected.

Brain. Vessels of dura mater not injected. Slight opacity of arachnoid. Veins, interiorly, not distended; posteriorly, moderately so. On removing brain from cranium, about an ounce of serum remained in the latter, probably escaped from the ventricles. Very small quantity of serum in left ventricle; none in the right. Sections of either hemisphere presented natural appearance: also, sections of cerebellum.

I have thus presented all the facts relating to the history of the cases which I was able to obtain as data for an investigation of the character of the disease. Although the reports of the cases are incomplete, they suffice to show that the fever presented an association of symptoms distinguishing it from the common bilious remittent form, which prevails in this region.

The testimony of the physicians, who saw nearly all of the cases, and were able to watch the disease throughout its course, may be added to the evidence of the facts which have been presented. They all considered the cases as peculiar, and quite different from those usually observed in that locality and the adjoining towns, over which their practice extended. The question now recurs, if not our usual form of fever, what were its type and appropriate nosological name? It appears to me very clearly to have been the form of fever which usually prevails in the New England states and in France, which has of late years excited so much attention, especially among the French pathologists, and which has been called, after Louis, *Typhoid* fever, or the *typhoid affection*.

The following are the considerations upon which this opinion is based: First, of the symptoms.

Diarrhea was a prominent symptom in nearly all of the cases of which I have any account. Excluding two cases, in which information on this point is defective, of the remaining fifteen, fourteen exhibited it; and in most of the cases it attended the commencement of the disease. It is worthy of remark, that in the single excepted case meteorism was present. The latter symptom was also present in a large proportion of the cases. These phenomena are highly characteristic of typhoid, and comparatively unfrequent in remittent fever.

Delirium of the low muttering character, or a modification of the intellect more or less approximating to this, was present in a larger proportion of cases than accords with our observation of the remittents of this region.

So, also, of pulmonary affection, as indicated by cough and expectoration. In the majority of the cases this is mentioned as a prominent feature. This complication is as frequent in typhoid fever as it is unfrequent in remittents.

The same holds good, also, with regard to headache and the presence of sordes.

On the other hand, the characteristic symptoms of the remittent form of fever were absent.

The disease came on with a gradual access, instead of attacking suddenly, as is the case generally in remittent fever.

Although chills, and sometimes rigors attended its accession, it does not appear that these were so pronounced and severe as in remittent fever. Nothing is said of their returning with that observance of periodicity which we know is very frequent at the early period of this disease.

Nausea and vomiting, which are eminently characteristic of remittent fever, (which, with the green-coloured discharges from the stomach, have given rise to the very general application of the term *bilious* to designate this class of fevers,) do not appear to have been prominent in a single case of those which were recorded.

It would serve to confirm the diagnosis, if the presence of the eruption

peculiar to typhoid fever, had been clearly ascertained. I could not learn at my visit that any rose spots had been observed; and as it was evening when I visited the patients, it would probably have been difficult, if not impracticable, to determine upon their presence. As to the fact of my looking for them I do not recollect. I only recollect making the inquiry, particularly of Dr. Camp, with whom I visited the patients. Dr. Baker has since stated to me, that he observed an eruption over the chest and abdomen in several of the cases. He did not look for it, and did not consider it important, but his attention was incidentally directed to the fact. He says that they resembled flea-bites, but were about half the size, and slightly elevated. He does not recollect at what stage of the disease this was noticed, but thinks toward the latter part.

Although if these were cases of typhoid fever, the eruption ought to have been present in a large proportion of the cases; yet the fact that their existence is not rendered certain, through the observations of the physicians who attended, is not to be regarded as proof that the eruption was not present. The spots being few in number, and located on the chest and abdomen, might easily escape the attention of those who did not appreciate the importance of seeking for them. Typhoid fever is not a modern disease, yet the fact of its being characterized by the presence of an eruption, has been discovered only recently.

These cases were, also, free from periodical remissions to a much greater degree than would have been expected in the same number of cases of the ordinary form of fever in this locality; while, on the other hand, the remissions which did occur were not more frequent or marked than is common in typhoid fever. This fact particularly excited the attention of the medical gentlemen who attended the cases.

Dr. Allen, in answer to my inquiry as to his opinion of the character of the fever, states, that he regarded it as a remittent fever, but the remissions were very irregular and "attended with putrid or typhoid symptoms." I may state here, that this gentleman is of opinion that the disease was modified by the use of water from the suspected well. Of this I shall speak presently.

The results of the autopsy (which, unfortunately, was limited to a single case) go to sustain the opinion which has been advanced. Indeed, these alone, in the minds of many pathologists, would, probably, be considered sufficient to establish the position.

But there are other circumstances not less cogent than those which have been submitted.

(a) The disease occurred at a season which, if the disease had been remittent fever, would have been very unusual. All the cases transpired between Oct. 19th and Dec. 7th. Remittent fever, it is well known, rarely occurs so late in autumn as the date of the first case; while, on the other

hand, typhoid fever exhibits a preference for the very period in which these cases did occur.

(b) Remittent fever shows no decided respect for age in the choice of patients. Typhoid fever seldom seizes upon an individual over thirty. The eldest of the subjects of this epidemic was not over 23. A good proportion were children.

(c) Remittent fever very frequently in its course or termination becomes converted into intermittent fever. Out of twenty-eight cases of remittent fever, according to our experience, it would be quite incredible that this conversion should not take place in a single instance; yet with regard to these cases this was the fact.

(d) According to our observations it would, also, be equally incredible, that out of eighteen cases of true remittent fever, after the expiration of more than eighteen months, intermittent fever should not have been developed in a single instance. Yet this is, also, true with regard to those who survived the disease under consideration.

These considerations collectively appear to my mind to establish, by irrefragable evidence, the correctness of the opinion that the disease in question was *not* our common remittent or bilious fever, but *was* the typhoid fever of New England. I pass now to consider the etiology or origin of the epidemic.

North Boston is situated about twelve miles from the lake shore, at a considerable elevation above the level of the lake. I am not prepared to describe the circumstances appertaining to its topography in detail, nor is it necessary to the present purpose. There are no paludal grounds at or near its location. The medical gentlemen named, have stated that it is as healthful a locality as any in the county. Intermittent fever has not been known there for many years. Cases of our common remittent fever have occasionally occurred before and since the epidemic, but not to a greater degree than in other portions of the same neighbourhood. What, then, was the source from which emanated the *materies morbi* of this epidemic; which, when the ratio of those seized with the number of the population is considered, and, also, the ratio of mortality, must, certainly, be considered as an extraordinary epidemic, both in the extent of its prevalence, and in its malignancy? My reflections on this department of the subject have led to the opinion, that the disease was imported from New England by the stranger who came into the place and died there twenty-three days before the first case occurred—after which the other cases followed in quick succession.

The fact of the contagiousness of typhoid fever has been a subject of much discussion and discrepancy of doctrine both here and abroad. Formerly denied, it is now acknowledged by Louis, who is especially distinguished for his researches into the history of this disease. He affirms, that the importation of the disease is often the origin of an epidemic,

and that an isolated case may be the cause of its prevalence. This opinion has received the sanction of other eminent observers; still, it is perhaps not generally received. In fact, the existence of a contagious principle, or a striking difference in this respect, is made to constitute one of the most prominent points of distinction between the two forms of fever alleged to be distinct, viz., Typhoid and Typhus. The question of etiology, in this instance, is, then, one of much interest and importance.

It may be remarked, in the first place, that no circumstances were discoverable, apart from the one mentioned, to which the disease could fairly be attributed. It must be confessed, however, that this negative fact is possessed of little weight abstractedly, since, from our ignorance of the remote causes of typhoid fever, it is probably difficult to trace its origin (apart from contagion) under any circumstances. But the fact that this fever has never, to my knowledge, been before observed, at least in an epidemic form, in this region, must certainly be regarded as giving peculiar force to the supposition that it was received by importation. This consideration, to my mind, renders the occurrence of the epidemic under consideration particularly interesting and important.

Was the disease, of which the young man who came to Fuller's died, typhoid fever? It is unfortunate that he was attended for the first fortnight by a Thomsonian, so that the symptoms were not observed by a competent physician from the first; and that an autopsy was not performed. Yet, under these disadvantages, I think there can be little doubt as to the identity of the disease with that of the other patients.

Dr. Allen, who does not explain the diffusion of the disease by means of contagion, states, in answer to my inquiry as to its identity, that "when I saw him, six days before he died, he was labouring under the same form of fever that the other patients had, together with a malignant dysentery. I learned from his friends that he was taken while on the road with diarrhoea, but not very severe, and after arriving at North Boston he grew worse continually." I was informed verbally by Dr. Allen, and by Dr. Camp, (who also saw him,) that when he came under their observation he was in that condition usually called typhoid, with low muttering delirium, sordes, &c.

Rev. Preserved Smith, of Warwick, Mass., in a letter in which he obligingly communicated answers to several inquiries relative to the subject, states that the young man left home a few days before he arrived at North Boston; that he had been "rather bilious" during the summer, but was as well as usual when starting on his journey. He states, farther, that during the November following his departure, (while the subsequent cases were in progress at North Boston,) there were a few cases of a mild, slow fever in the town of Warwick, but none in the immediate section in which the young man resided. The fever was, probably, the common autumnal fever of New England; in other words, typhoid fever.

The fact may be worthy of mention in this connection, that the father and a brother of this young man, the following spring, died of erysipelas, of which disease there were several cases in the town at the same time, but proving fatal in these two cases only.

These are all the facts bearing on the question of the origin of the epidemic which I have been able to obtain. Not to prolong the discussion, I will only repeat, that it appears to my mind, in view of all the circumstances, to be the most rational and consistent conclusion, that the young man left home with the germinal principle of typhoid fever in his system; that this principle was developed by the fatigue and exposure incident to his journey; that the disease derived from the latter circumstance a greater severity, and perhaps, also, an increased communicability; and that the subsequent cases of fever were due to contagion or infection thus introduced into a community closely congregated, and having free intercourse with each other.

It may not be improper to add, that in arriving at this conclusion I have not followed any bias of prepossession for the doctrine of contagion. I make this statement because it is sometimes easy (and alas! too common), to select facts, and give them a direction to make them apparently conform to sustain a preconceived opinion. I had formed no opinion before contemplating the facts with regard to the subject under consideration; and I have endeavoured to present the facts in this memoir precisely as they have presented themselves to my own mind.

I cannot avoid the apprehension, that this article will be deemed extended to a degree not commensurate with the interest and importance of the matter which it contains. The questions, however, involved, relate to points which have, of late years, been much discussed, and it is highly desirable that they should be settled by the collection of facts upon a definite and firm basis. The questions alluded to are, *first*, as to the radical distinction between the forms of fever called remittent and typhoid; *second*, the propagation of the latter by contagion or infection. The relations which the epidemic at North Boston appear to have towards these questions of scientific interest and importance will, I trust, excuse the space which it has been necessary to occupy, in order to present a fair exhibition of the data upon which were based the conclusions submitted.

The writer desires to add, that in arriving at the conclusion that the fever under consideration was typhoid fever, he does not wish to be considered as expressing any opinion with reference to the propriety of instituting a radical distinction between the so-called *typhoid* and *typhus* fevers. The phenomena were those which are described as appertaining to the former rather than to the latter; but whether the two are to be regarded as distinct forms of fever, or only modifications of the same form, are questions wholly extrinsic to the present subject.

It remains, in conclusion, to notice the belief which was current in the

settlement and neighbourhood where this epidemic occurred, that the public well had been poisoned, and that the disease was due to this source. I have not considered this as involved in the subject of the etiology, because, assuming the fact that some poisonous substance had been introduced into the well, the results would have been of a definite, specific character, due to the particular modification of the poisonous substance employed, which would be capable of being appreciated. We have no grounds for the supposition that any poisonous substance capable of being introduced into water, would produce an epidemic fever of any type.

I was supplied with a jug of the water from the suspected well, portions of which I submitted to two competent practical chemists, Dr. Raymond and Dr. Hayes, of this city. It was carefully analyzed by each of these gentlemen, and no traces of any poisonous agent were discovered. On the other hand, it was found to be remarkably pure, the only foreign substance found in much abundance being saccharine matter, which was accounted for by the fact that the vessel in which it was brought to the city had been a molasses jug!

When the result of the analysis of the water was communicated to the people of North Boston, they became fully impressed with the belief, that the same evil-disposed persons whom they suspected of poisoning the well, had contrived to remove from the jug the poisoned water, and substitute pure water in its place. If the matter had any real or important connection with the etiology of the disease, it would be proper to investigate the correctness of this suspicion, but, under existing circumstances, it seems quite unnecessary to enter upon any discussion respecting it.

BUFFALO, April, 1845.

ART. III.—*Observations on Uterine Hemorrhage.* By PAUL SPOONER, M. D., of New Bedford, Mass. (Read before the New Bedford Medical Association, Feb. 18th, 1845.)

GENTLEMEN:—Having met with an unusual number of cases of flooding within the two years past, I have thought that I might be able to offer something on this subject that would be as interesting and useful as any from the writings of others, or from the volume of my own experience of nearly forty years, which you are aware has not been very limited in obstetric practice.

Flooding is one of the most alarming events that occur in labour or at an advanced stage of pregnancy, and is attended with such eminent risk to both mother and child, that it ever must be a source of extreme anxiety to

the medical attendant, and summon all his skill; and however well prepared he may be by reading and reflection, he yet may meet with cases that will put all the resources of art at defiance, and he can only stand and witness the fatal progress of the fell destroyer with every beating pulse.

Floodings that occur in pregnancy, or during labour, are of two kinds, proceeding from different causes, arising from the situation of the placenta. Dr. Rigby calls them "the accidental and the unavoidable." The accidental, arises from a partial separation of the placenta, when in its natural situation, or of the decidua from the uterus; the unavoidable, from the placenta being wholly or in part attached to the os uteri.

The accidental is sometimes attended with severe pain in the part where the separation takes place; from the effusion of blood between the placenta and uterus. Albinus relates a case, in which the separation was complete, excepting at the margin of the placenta. They are said sometimes to be so large, as to induce faintness and great prostration of strength without any appearance of blood escaping. The separation sometimes is very small, but is sufficiently large to endanger the patient's life: in such cases the flooding is apparent.

In the early stages of pregnancy, a rupture of the decidua may be attended with almost as much danger as a separation of the placenta, in consequence of the size and number of its blood-vessels, and is supposed to be a frequent cause of abortion, by not keeping up that gradual and equal distension with the uterus, and thereby becomes stretched and torn. In the advanced stage of pregnancy it becomes less vascular and thin. I once met with a case at the full period of gestation, in which the decidua was very much thickened, and caused the membranes to adhere to the uterus throughout its whole extent. This patient had been afflicted with a good deal of pain about the abdomen, and some fever, with soreness of the mouth, and emaciation for several weeks before her confinement, resembling puerperal sore-mouth. Her labour was easy and natural. After waiting the usual time after the birth of the child for the uterus to contract, I took hold of the navel string, and pulled it gently for some time; it suddenly seemed to give way, and with the placenta came the uterus inverted, with the placenta attached. The placenta was attached to the fundus. I insinuated my fingers between the placenta and uterus, and commenced separating them and the membranes from the whole internal surface of the uterus, except the orifice which had naturally been torn. I then grasped the uterus firmly in my hand, and carried it upward, gently rotating it until it passed through. I let my hand remain in the uterus for some time to induce it to contract. This patient recovered, and had one child afterwards.

The causes of accidental hemorrhage, besides those already enumerated, may be: falls, blows, straining at stools, over-fatigue, lifting great weights,

excessive laughter, fright, general plethora, and a varicose state of the veins of the umbilicus.

The symptoms which usually attend accidental hemorrhage at first, are: slight pain or uneasiness in the back and bowels, and more or less discharge of blood, which increases until fainting is induced, sometimes without pain. If pregnancy is pretty far advanced, labour-pains may come on, increasing gradually until it is accomplished; each pain will arrest the hemorrhage, if it is accidental, and return again after the pain, which will distinguish it from the unavoidable. It is of the utmost importance to ascertain the kinds of hemorrhage your patient is labouring under; it can always be done by an examination, unless the os uteri should be out of reach—a circumstance to be kept in mind—or so little dilated, that you cannot feel its contents. If the hemorrhage has been considerable, we shall generally, in the advanced stage of pregnancy, find the os uteri soft and yielding, the membranes smooth and uniform to the touch.

The treatment must depend on the stage of pregnancy in which flooding takes place. If in the early stage, it will generally be sufficient to confine the patient to a hard bed; and keep the mind quiet and tranquil, and the bowels open, and the body lightly covered with bed-clothes, and cloths wrung out of any cold liquid, as rum, or vinegar, and water, or ice, may be applied to the abdomen, and vulva, if the case is urgent. Of all the remedies for arresting uterine hemorrhage, the acetate of lead and opium stand pre-eminent. I have more confidence in them than any or all other internal remedies. Dr. Rush first discovered and made known to the world the wonderful effects of lead in arresting uterine hemorrhage. It may be given in doses of two or three grains of acetate to half a grain of opium every two or three hours. I have rarely met with a case that required more than two or three doses to arrest it. Dr. Dewees says, "it may be given in doses of from three to ten grs. of acetate, every half hour until its object is attained." He says, "he has not only found it safe, but necessary in such quantities. It will be best to premise a bleeding, if the pulse is full or the patient of a plethoric habit, and in the first stage of pregnancy." He says, "he has met with some cases where the sugar of lead had no effect when given by the mouth, but where it has produced an almost instantaneous effect when a scruple of the lead to a gill of cold water, and one drachm of tinct. of opium has been thrown up as an enema." In uterine hemorrhage, the tampon holds a conspicuous place as a remedy by most of our best writers; but its use, I think, is confined exclusively to those cases where flooding occurs in the two or three last months of pregnancy, or during labour, and the pains insufficient; and it acts entirely, I say, from the law of irritation, which law the uterus is obedient to, in an eminent degree, when in an impregnated state. What but this causes the uterus to act after you have ruptured the membranes, and let the water escape, and the ovum becomes as it were a foreign body? Then the uterus will begin

to act, and throw it off, and will call to its aid the muscles of the abdomen and diaphragm, till its object is accomplished. You will also find the same law prevailing whenever there is an effusion of blood into it, so as to increase its volume.

Mrs. B. was taken Nov. 7, 1844, at 4 A. M. At 8 A. M. I was called; found she had just entered her seventh month with her second child. The pains were so considerable that it appeared necessary to make an examination; found the membranes protruding nearly even with the os externum; they were very thin, and ruptured by the slightest touch: the fluid discharged was blood and water; this I did not know until my evening visit; the quantity was very great; the pains ceased entirely. I passed my hand high up; could just reach the os uteri so as to ascertain its condition, and found it natural. I saw her several times during the day; she had no pain since the membranes were ruptured. I was called at 7 P. M.; her pains returned. After I had been in the room an hour or more, observed her to gape between her pains, which had become considerable; examined her pulse; found it was feeble; she said she was faint; on inquiry, found she had been shedding blood all day, after the membranes were ruptured—a circumstance I was ignorant of before; made an examination, found the orifice dilated to the size of a crown piece, soft, and dilatable; assisted it with every pain until I was able to ascertain the part presenting; found it was the breast, with the arms up by the side of the head; I had brought one down into the vagina before I could determine this point. I gave the ergot, before I could satisfy myself as to the presentation, which some doubtless will think rash; but the prostration of strength my patient was labouring under, and the feeble efforts the uterus was making to relieve itself, appeared to me to justify the act; it being in this early period of pregnancy, I knew there was no chance of saving the life of the child, and that delivery must be effected as soon as practicable. I sent for Dr. Reed and my instruments. On his examining the case, we agreed to first attempt to introduce the blunt hook, and get hold of one of the lower limbs; if we should fail in that, then to open the chest, and remove its contents and deliver. I had previously attempted to introduce my hand and turn the child, but found the resistance so great that I did not think it practicable. I now passed the hook up till it came in contact with the thigh, caught it, and brought it down, then pulling it, the position of the child was soon changed; the arm receding as the breach advanced, and after a few pains the child came; the placenta came soon, and we had the satisfaction of leaving the patient a few hours after as comfortable as could be expected under such circumstances; she recovered rapidly. There was a rupture of a varicose vein of the umbilicus. The tampon needs to be applied with much care. I prefer pledges of lint, or the common raw cotton dipped in good vinegar, and carried carefully up to the os uteri in such quantities as you can conveniently introduce until the vagina and os

externum is completely filled, and then apply the T bandage. If the case is urgent, I would take a seat by the side of the bed, and press my hand firmly and steadily on the tampon until the pressure of the tampon on the orifice of the uterus brings on pain and arrests the hemorrhage. I have never been able to apply the tampon so as to arrest hemorrhage by plugging as is supposed; nor have I ever known it to do so unless it excited pains. I have been called to a number of cases in which it had been tried before I saw them.

Ergot is another invaluable remedy in floodings, particularly in those cases where you wish to excite uterine action, and arrest hemorrhage; it sometimes fails of producing this effect, particularly if there has been no disposition to labour-pains before it was administered. And if given, and it produces its specific effect, and that effect passes off, I think it may be established as a fact, that you cannot give it in any quantity that will bring on pains again. It may be given in decoction, made from $2\frac{1}{2}$ of the ergot to $1\frac{1}{2}$ gills of boiling water; one-third to be given every twenty minutes until it excites its peculiar action.

In abortions that happen in the second or third months of pregnancy, the placenta is frequently retained and causes great flooding, so as to endanger the life of the patient if not arrested. In such cases, I often find a dose of ergot timely administered to produce the happiest effect, where the sugar of lead had failed. I have met with a number of cases, in which all these remedies have not arrested the flooding. I then make an examination, and frequently find a portion of the placenta at the os uteri, and endeavour to bring it away. If it be so far out of reach that you can only break down a portion of it, you may feel a degree of confidence that your patient is safe. I have never known hemorrhage to continue after this has been effected.

The mode which has been recommended, and one that I have of late years pursued, is to place the woman on her left side; and to have an instrument made of a fine piece of wire, a foot in length, with a handle at one end and a curve at the other, about three-fourths of an inch broad, flattened, so as to give it more power to hold on, or break down the placenta when applied to it—a simple instrument certainly, but one that, I think, will be found to be easier of application, and equally as safe as the placenta forceps, that have lately come into use. I introduce my left hand into the vagina, having the instrument in my right, carry it upwards into the os uteri till I can grasp a portion of the placenta, my finger on one side and the instrument on the other. I then bring them together, and repeat it until I break down a portion of it. Now, whether the irritation produced by this operation on the uterus causes it to contract and arrest the hemorrhage, or the breaking down a portion of the placenta, I am not yet prepared to say, as I think I shall adduce further evidence to question the commonly received opinion on this point.

Mrs. D., in her fourth pregnancy, about 30 years old, was taken in labour December 9th, 1844; supposed herself to be in her eighth month. A short time before I was called she had aborted; the foetus was very putrid; said that she had discharges for some time; they were so offensive that they were almost insupportable to herself. The child could not have been more than four months when it perished. I was called at 11 A.M.; cut the navel string, and proceeded to remove the placenta; it soon came in a very putrid state. She said she did not believe I had got all, for she was as large as before. I put my hand on her abdomen, and felt another child; but it was entirely out of reach per vaginam. She flowed more than I had any reason to expect in such a case; gave her 4 grs. acetat. plumb. with very little effect and no pains; gave the ergot. I waited till 4 P.M., and introduced the tampon; the pains then gradually increased until I thought the uterine action sufficiently established; then removed it, found the membranes protruding into the os uteri so as to arrest the hemorrhage; pains increasing, the membranes soon burst with an unusual quantity of water; the child presented with the breech, as I at first supposed; as it advanced, I discovered it to be the left scapula and arm; the cleft between I had mistaken for the breech. She was lying on her right side. I prepared myself, and gradually intruding my left hand in the absence of pain, carried it upward with much difficulty until I caught the left femur, and brought it down, so that I was able to reach the other, the child turned readily, and was soon delivered.

If hemorrhage in the advanced stage of pregnancy is not arrested, by means already suggested, and the pulse grow feeble and quick, face pale and bleached, attended with restlessness and tossing about the limbs, it then becomes necessary to rupture the membranes and deliver. The os uteri will, generally, be found soft and yielding to gentle dilatation, and must be persisted in until the regular uterine action is established so as to arrest the hemorrhage, or is sufficiently dilated to use the forceps, if the head presents, or turn the child, or open the head; if the urgency of the case demand it, the patient must be supported by stimulants.

We come now to the consideration of unavoidable hemorrhage. This arises from one cause alone, and that is, the attachment of the placenta more or less completely over the os uteri; it sometimes is attached to one side, with its edge lapping over the orifice; and at others, it is equally attached to the whole internal orifice of the uterus, sealing it up, as it were, hermetically.

That this is the situation and condition of the uterus in such cases, I presume I shall be sustained by the recollections of several gentlemen present who have been witnesses of the fact. In one case, after the os uteri was sufficiently moulded out for the child to pass, the placenta that was completely over the orifice at the beginning had receded nearly out of reach of the finger, in consequence of the remaining portion retaining its

original attachment to the uterus; it is a circumstance of great importance in the diagnosis of this formidable freak of nature.

"The placenta was occasionally found at the os uteri in the days of Guillemeau, Mauriceau, Daventer, Pugh and others. They believed it had been separated from its original situation, and fallen down. Paul Portal first spoke of it as adhering to the os uteri, and the necessity of delivery by art. Smellie, Gifford, and others seem to be aware that such cases did sometimes occur." But it appears that the subject was but imperfectly understood even in Europe until the publication of Dr. Rigby's essay on "Uterine Hemorrhage" in 1775.

Hemorrhage seldom occurs before the sixth month in placenta presentations; from that time until the full period of gestation it is very liable to occur. I wish to impress on your minds one point, and that is, the condition of the os uteri in such cases. We know, in ordinary cases, the uterus, in the two or three last months of pregnancy, becomes thinner at its neck or lower part, and enlarged, and permits the descent of the child; and this is what women call the settling down of the child. Now, when the placenta is attached to the os uteri on all sides, it prevents that moulding out of it, in the last months, which takes place in common; in consequence of that firm adhesion and support which the placenta gives the uterus, we shall always find it higher up, and, in many cases, out of reach on examination. After the sixth month, and sometimes later, nature begins to bring about this process of dilatation, and in doing it some portion of the placenta must be separated, and flooding ensues, which may be repeated several times without exciting much alarm till, by its repetition, fainting ensues. If the blood finds passage outwardly, it will be without pain; but if the separation does not extend to the os uteri, so as to permit it to escape, you will find your patient attacked with pain, which will go on increasing with the accumulation until, by their force, a further separation will be produced, and the blood find a way to escape, and then the pains may cease.

Mrs. R., 40 years old, a very strong muscular woman, weighing 180 lbs., was taken in pain June 4th, 1842, three or four hours before I saw her at 1 P. M.; had become so severe before my arrival, that one of the attendants met me at the door, urging me to hurry, saying the child would soon be born. I prepared myself, and on taking my seat, a violent pain came on, and there was a sudden gush of something that I supposed to be water, but soon found it was blood; the pains then entirely left her. On examination, found the pelvis broad and spacious, but the os uteri, and, in fact, the whole body of the uterus, entirely out of reach, a circumstance new to me at this time, it being the first case of the kind I had met with. In this case there was evidently a separation of a portion of the placenta from the uterus, but this separation did not extend to the orifice of the uterus and permit the blood to escape: here you see an exemplification of law, before alluded to; as soon as the distending power was removed the

pains ceased and could not be excited again. I used the acetat. plumb. freely without effect, and cold applications. I had no faith in plugging from what I had seen of its effects, and sustained in this opinion by some writers. Nature not making any effort to deliver, I then sent for Dr. Read and my instruments. His views corresponding with my own in the case, we concluded to wait a little and see if the pains would not return; but finding they did not, it became necessary to deliver. I introduced my hand, and passed it up between the placenta and uterus, and ruptured the membranes; some little pains followed this operation, but not enough to accomplish the object; we then gave the ergot, in large doses, with very little effect. I then commenced dilating the os uteri until I could get at the head, and opened it, and with great difficulty succeeded in delivering; but nature was so far exhausted that she died in four or five hours after. After the termination of this case, I regretted that I had not used the tampon, and thought if another occurred I would not omit it.

We all know the wonderful provision nature makes in such cases with animals in the two or three last months going with their young. The mare and cow, for instance: at this period we find the fat, that is deposited about the hips and parts concerned in parturition, to be gradually absorbed; no matter how sleek and fat they may be, it will be taken up here, so as to resemble the poorest animals; (and is what farmers call, "falling in about the hips;") nor is she less provident in her wonderful care for woman ordinarily. But in these cases, nature seems to have become recreant to her usual sanative provisions, and art here must come in and aid and support her in her devious way.

Mrs. H., 28 years old, not more than four feet four inches in height, of a very nervous temperament, in her eighth month with her fifth child, was taken in labour December 6th, 1844. I was called at 2 A. M. on the 7th; did not think the pains enough to render it necessary to make an examination; the pains, as she expressed it, seemed to work up into her stomach, instead of downward; remained with her during the night; had an engagement out of town that day, which I could not dispense with; told her so, and that I would make an examination, and if there was a prospect of her getting through in time enough for me to fulfil my engagement I would. On making examination, found the os uteri nearly out of reach; its orifice firm and entirely closed. Seeing there was no prospect of the labour being terminated seasonably for me, after giving her 10 grs. Dover's powder, I left her at 5 A. M. At 4 P. M., the pains having continued with little remission, she was taken with flooding, for the first time. They sent for Dr. S. Bartlett. He found her flowing profusely with fainting. On examination, found the placenta attached to the os uteri. He sent for Dr. Whitridge. The pains were considerable, and had brought the head down, so they thought the labour would soon be ended. After a pretty good pain, the head receded suddenly entirely out of reach. She now,

became very faint and almost pulseless at the wrist. They sent for me at 6 P.M., and on my arrival gave the foregoing history. We, of course, presumed there must be a rupture of the uterus; they wished me to make an examination. Found I could just reach the head with my finger; on consultation, thought best to deliver, thinking she might be able to bear it. We sent for instruments; and I was to endeavour to dilate the orifice, so that we might be able to open the head. I commenced dilating with every pain, and soon found the head descending quite rapidly until it passed through the os externum; the child was dead. The mother remained very feeble and fainting for several hours; she took a full dose of tinct. opii and other stimulants; reaction came on, and continued for a few days: she finally recovered. In this case, the pains were not sufficient to separate the placenta from the uterus until 24 hours after she was taken in labour, or a little before Dr. Bartlett was called. Now, did the action of the uterus, after making an ineffectual attempt to expel it through its orifice, become inverted and push it towards the fundus? These questions I must leave to abler and more experienced minds to determine. Dr. Whitridge was assisting her at the time when the child receded, and could not have been deceived; he is a gentleman of great professional experience.

In the treatment of unavoidable hemorrhage, we should ever bear in mind the infinite moral responsibility resting upon us. Here are two immortal beings, whose lives are, as it were, in our hands, and there is very little time to be spent in temporizing. The life of the mother should never be left in jeopardy for the sake of the child. If the flooding is not great, and there has been but little loss of blood, try the acetate of lead and opium, by the mouth, as before suggested. If the flooding is considerable, make an examination. If you find the uterus almost out of reach, and its orifice rigid and firm, and little, if at all, dilated and without pain, you then may be sure you have a case of no trifling nature to deal with, and prepare to act accordingly. What is to be done? Use the tampon as already described, not with the view of plugging up the vagina, as is generally supposed. You might as well think of plugging up the mouth of the Mississippi with a bale of cotton that grows on its bank. Look at the muscular structure of the vagina and uterus, and its wonderful capacity to be moulded out in any and all directions almost that nature or art may attempt.

Dr. Ramsbotham tells us he has taken away more than a hat crown full of blood after the delivery of the child in such a case; and that the effusion is sometimes so great as to give rise to the suspicion, that the woman was going to have two or three children had it not come on so suddenly. Use the tampon. I say give ergot; imitate nature in her kindlier moods, when she wishes to relieve the womb of its superincumbent load, and presses the smooth and delicate membranes, with their

accumulated waters, into its orifice, that it may yield to the stimulus of distension. This idea has been suggested incidentally by others, but not insisted on. They view it commonly acting as a plug, stopping up the vagina until a coagulum is formed; I use it as an irritant alone, to be applied to the os uteri when high up and out of reach, where manipulation, which is better, sometimes is impossible, and where there is no effort of nature to bring on uterine action.

If these means fail to excite uterine action and arrest hemorrhage, then remove the tampon and gently insinuate the hand between the placenta and uterus, and dilate the orifice as soon as it can be done, and rupture the membranes, and deliver, either with the forceps or turn the child; or open its head, and then bring it away: all which operations you already understand, and it would be useless to describe them. Never perform the operation in too exhausted a state of your patient, lest she die in your hands, but give cordials and stimulants, and endeavour to recruit the vital powers before you operate.

Mrs. E., 33 years old, and in her eleventh pregnancy, had aborted five or six times in the early stages of pregnancy; of light complexion, thin skin, and a very vascular system; always flooding tremendously at these times, as much so as when she went to the full period of gestation. She had got into her eighth month, but had been shedding at times for the last six months, so much as to confine her to her bed almost the whole time, and required frequently the acetate and opium to arrest it.

June 13th, 1844, at 1 A.M., was taken with flooding. I was called at 2. I gave her the acetate alone, hoping that labour would come on and relieve her from her unpleasant situation. She was a lady of great firmness and self-possession, and had endured all these restraints with a martyr's zeal. I saw her frequently during the day; the medicine seemed to keep the hemorrhage at bay, but without pains. When I left for the night, I directed them if the pains came on, or the flooding returned, to let me know it. At 1 A.M., I was called; found her flooding, with slight pain; made an examination; found the orifice little, if at all dilated, presenting a firm, hard, unyielding mass, very unusual to the touch. I then commenced plugging. She was a good deal exhausted from the discharge. I was aware of the trouble that awaited us, and sent for Drs. Read and Whitridge. They came. For a time it seemed checked; after a while we found it was not; the pains had increased. We gave the ergot in large quantities, and thought it best to deliver. On removing the tampon, I was struck with the improvement, by the descent of the uterus and the partial dilatation of its mouth. After removing the last portion of the tampon, which had been applied with great care, and retained firmly in its situation by the bandage, I then introduced my hand, insinuated it between the uterus and placenta, so as to rupture the membranes and let the waters escape. This had little effect in increasing the pains; flooding still continuing, it was deemed best to proceed and deliver,

and was accordingly done, by dilating the os uteri, and then opening the head. She suffered very much from the operation, and the great loss of blood she had sustained, caused her to sink rapidly, in spite of the appliances that art could suggest; and at half-past 9 A. M. her eyes were closed by death.

Dr. Collins, late of the Dublin Lying-in Hospital, in his sixteen thousand, six hundred and fifty-four cases, met with only eleven of unavoidable hemorrhage; and it does not appear that he used the tampon in any case. It, however, does not lessen my views of its utility in certain cases.

I have been addressing you, gentlemen, with great imperfection, I am aware, on one of the most interesting subjects that you will ever be called on to treat, interesting from its moral and social relations. It is an accident that less frequently occurs in first pregnancies than afterward. Here is a mother, and child, and she, perhaps, one whom many call by that all-endearing name, *mother*.

ART. IV.—*On Rheumatism of the Uterus and the Ovaria.* By ISAAC E. TAYLOR, M. D., of New York. (Read before the Pathological Society of New York, March 12th, 1845.)

To the Germans particularly do we owe the credit of having called the attention of the profession to this form of disease, and especially are we indebted to Wiegand, of Hamburg, who first published his essay in 1803, ("Von der Ursachen und der Behandlung, die nachgelurtszo-gerungen,") and followed by Carus, Schidtmuller, Haase, Welten, Siebold, Busch, Joerg, and Moser. According to Busch, Alphonse Le Roi and Chambon speak of it, but they have given very little consideration to the subject—and, on further investigation, an English physician in London, G. Charlton, gave to the profession, an Essay entitled "*Inquisitio de Causis Catameniarum et uteri Rheumatismo,*" published in 1685. The French had adduced nothing on the subject, till the essay of M. Salathé, a pupil of M. Stoltz, of Strasburgh, was published in 1837, followed by the Bibliographical Researches of M. Dezeimeris (in *L'Expérience Journal de Med. et de Chirurgie*, 1839, for May and June). M. Caseaux has, (in his *Traité théorétique et pratique de l'Art des Accouchemens,*) he says, borrowed from these two essays, and remarks "that this malady is still unknown to the French nosologists; and this section of his treatise is copied entire into the translation of Colombat d'Isère, by Dr. C. D. Meigs, Philadelphia, published lately. Respecting rheumatism of the ovaries, it is incidentally mentioned by Kruger and Murat; it is also referred to by Cherau in his *Mémoires*

pour servir à l'étude des Maladies des Ovaries, and a case has been given by Copland in his *Dictionary of Practical Medicine*, which I have appended to my cases. With these few prefatory remarks, I shall proceed to the relation of the cases, the object being of a practical nature, and which I hope may not be considered as so much time misspent and unprofitable.

CASE I. In the spring of 1842, I was requested to visit Mrs. S. A., multipara, aged 30, whom I found sitting in a rocking chair, with her hands grasping the arms of it, her limbs extended, and her body fixed in position so as to give her the appearance of her being in actual labour; she was, after the contractions had passed off, in a moderate degree of perspiration. The paroxysms were of a severe character, and continued from 10 to 15 minutes at a time, and had commenced nearly two hours previous to my visit. The countenance was anxious, the abdomen tender on pressure; and when the uterus was under the paroxysm, it was exceedingly hard, and firmly contracted;—she insisted that from her own sensation, the child must be, or could not be far from being, born, and that she was unable to be moved to her bed. Having her, under such circumstances, placed as properly as I could, an examination, per vaginam, was made, which was with great difficulty accomplished; but instead of finding the os uteri dilated and the child low down, the former was discovered as long as at the 7th month, and the external orifice not more dilated than ordinary at this period—also high up and a short distance from the sacrum. The pulse 84—skin moist, thirst moderate; and there was frequent inclination to pass urine, with a disposition to diarrhoea.

The only cause to which the patient could attribute this attack, was her having exposed herself to the privy the preceding day, which she had not been accustomed to do, and presumes the commencement of the attack took place from that time, as, on that day, towards evening, she had had severe paroxysms, though of short duration, and which left her after she had become warm in bed.

In this lady the paroxysms continued during the whole day, and nearly the whole of the evening; when she was found in a profuse perspiration, and the paroxysms had ceased; she was subject to these attacks till the completion of her full term, and they continued sometimes with great severity; but by the remedies that were administered, they were after a time subdued. The treatment adopted in this case, was Dover's powder every two hours, in 10 grain doses for 3 doses, and emp. belladonna to the abdomen.

The usual remedies did not succeed in preventing the return of the disease, whilst the Dover's powder, after its full effect had been produced, always succeeded in its object.

The labour of this lady was not so severe as her former labours had been, but after the uterus was dilated to its fullest extent, (though the labour continued during a day and a half,) the child had not made any

progress further than applying itself to the oblique diameter of the pelvis, when the ergot was given, and in half an hour the child was expelled. There appeared to be before the ergot was given, an inability in the uterus to act with sufficient power to expel the child, and that such was the case, seems to be shown by the happy effect of the ergot in bringing the fœtus in a few minutes through the whole cavity of the pelvis.

I would further remark, that I attended this lady this winter during a short attack, and which she said she could compare to nothing but actual labour ; in this instance she had slight fever, dry skin, thirst, and frequent inclination to pass urine, coming on in paroxysms, and ceasing after the second day, by a free discharge of leucorrhœa, though she was not pregnant, and had not had leucorrhœa before for many months.

CASE II. April 4th, 1844, 4 P.M., I was requested to visit Mrs. McG., primipara, aged 23, who was supposed to have all the symptoms of being shortly delivered, though but 5 months advanced in gestation. I found the patient laying upon her back, and complaining very much of the excessive pain she was suffering, which came on in paroxysms, and which lasted fully 5 minutes. The countenance expressive of much pain ; the abdomen tender to the touch ; the uterus hard and contracted ; the skin natural, and the pulse 88. The pains were of an expulsive character. An internal examination discovered the neck of the uterus very hard and firm, the os uteri closed, and exceedingly sensitive, and covered with a number of follicular glands enlarged to the size of a pea, the uterus, during the contractions, appearing to force itself completely into the cavity of the pelvis. The remissions in this case were not of long duration. The treatment pursued was warm fomentations to the abdomen, and Dover's powder, 10 grains every 3 hours, and after two doses and the frequent application of the fomentations, the paroxysm left her, and she slept well during the evening ; though there was some soreness continued afterwards. The paroxysm, in this instance, commenced at 12 o'clock, A.M., and ceased at 1 o'clock, P.M.

April 5, 6 $\frac{1}{2}$ P.M.—The patient's husband came in great haste, saying she was expected to be confined every moment, and would probably be delivered before I could reach her. When I arrived, her screams were very loud from the severity of the pains which she was suffering. The countenance was anxious ; the abdomen could not bear to be touched, even with the slightest pressure ; the uterus strongly contracted ; and I was informed that the pain had continued half an hour, having a true expulsive character. Both the patient and her friends were persuaded that the child must be shortly delivered ; skin rather dry ; pulse quick ; tongue furred ; belly slightly tympanitic ; she was unable to move, and remained all the time on her back ; there had been no discharge of the waters ; no hemorrhage ; and the paroxysms had continued from 3 o'clock, and lasted till 9 o'clock that

evening. An examination, per toucher, discovered the neck of the uterus hard; os uteri closed, but excessively tender to the touch, and the fœtus could be distinctly felt pressing on the anterior portion of the uterus and against the pubis; after the contraction, the uterus would assume its natural soft and pliable feel. The treatment adopted this time, was 12 leeches to the abdomen, emollient poultices, and Dover's powder, 8 grains every hour till 11 o'clock, P. M., at which time she was much easier, being in a perspiration, and had not had a paroxysm for two hours. This patient continued free from a return of the disease till 1 o'clock, P. M., next day, when slight paroxysms were felt, and a Dover's powder given, which quieted the pains, and she continued comfortable till the 7th instant, when she had a renewal of the pains, which were mild at first, but gradually became so severe as to need my attendance at 9½ P. M.; and when I saw her, firm contractions had occurred, and the pulse slightly accelerated; skin not very dry; abdomen tender, and talking incoherently at intervals. Tart. emetic $\frac{1}{4}$ gr. was given every three hours; she was not seen till 12½ the next day, when she was laying perfectly quiet on her back, and looking vacantly, with natural pulse; the contractions had ceased. Tart. ant. grs. iv. ordered every two hours. At 4½ P. M., I was sent for in great haste, saying she was dying, but I did not see her till 6 o'clock, when she had passed into a state of stupor, lying on her back, with limbs extended; no stertorous breathing; pupils dilated, and eyes fixed; pupils do not move by the light; the upper lip tumid; totally insensible. At this stage of the attack, as Dr. Boyd was not far distant, visiting a patient, I sent to him, requesting that he might visit the case with me, which he kindly did, and advised the continuance of the tart. antimony and the application of cold to the head. Venesection had been premised. 11½ P. M., the same.

April 8th, at 5 A. M., she spoke, for the first time, which she had not done for 20 hours. The bowels were moved at this time freely, and there was slight return of the paroxysms of the uterus; slight tenderness on pressure. After this attack she experienced but one more till the completion of her delivery, which I did not attend her in, being absent from the city, and which took place in August.

CASE III. Through the kindness of Dr. Henschel, I have been favoured with the annexed case, which occurred in the unimpregnated state after a miscarriage.

Mrs. H., 24 years old, multipara, had a miscarriage during the second month, and lost more than the average quantity of blood. Eight days afterwards, she exposed herself to a privy, and the next day she had great bearing down, and a frequent desire to pass urine, which she did under excessive pains, and very little at a time; the urine looked of a dirty brown colour, and left a reddish sediment at the bottom of the vessel. Great pain

above the symphysis pubis ; pressure of the hand insupportable ; the pains are greatest during the evening and night, having a remission towards morning ; pulse ranges from 100 to 120 in the evening, and in the morning 80 to 85, a little hard ; the skin moist, except in the lower part of the abdomen, which is hot and dry. When the exacerbation comes on it is accompanied by severe headache and thirst. There is no discharge from the vagina, and the uterus feels hot and tender. The pain is much increased by coughing, sneezing, and, even by talking, and sometimes as strong as neuralgia. The 3d or 4th day of the attack she had syncope several times, caused by turning in the bed, and cannot lay on any other part but the back, and is unwilling and unable to be moved.

The treatment in this case was antiphlogistic, under which she gradually recovered ; at the same time a profuse fluor albus appeared, which had been habitual with her prior to pregnancy.

CASE IV. This case of rheumatism of the ovaries has been transcribed from Copland's Dictionary, and is adduced as an evidence that the uterus is not alone subject to rheumatism. It is one which resulted from metastasis.

Mrs. P., of —— street, Walworth, was attacked 15th July, 1821, with most excruciating rheumatic pains in the loins and limbs, increased on the slightest motion, or on attempts to turn in bed. She was in a profuse perspiration, and her pulse full and about 100. She attributed the attack to sleeping in a damp bed when traveling. She was about 26 years of age, strong, plethoric, and of the sanguine temperament. The catamenia were usually very abundant, and seldom at longer intervals than 14 days. Their occurrence was, therefore, soon expected. She had never been pregnant. About 3 days after the commencement of the rheumatic attack, and whilst I was attending her, she suddenly experienced an attack of most acute pain in the hypogastrium a little above each groin ; soon afterwards two tumours could be distinctly felt in the regions of the ovaria. They were extremely painful and tender upon pressure. The pains in the limbs were greatly abated, but pain was still complained of in the loins ; all the symptoms continued. Bowels costive ; urine scanty and high coloured, with frequent micturition ; countenance flushed, excited, animated ; temper variable and hysterical. Treatment antiphlogistic, and four or five days after the attack, the catamenia came on, and the pain, tenderness and swelling gradually disappeared from the hypogastrium.

Remarks.—The question that, I presume, will propound itself to many of the profession is, are these cases of rheumatism of the uterus, or are they cases that are more nearly allied to neuralgia of the uterus, hysteritis, or false pains ? Respecting the latter point, which would appear to be the most prominent in the investigation, I grant that a mistake might be made and

entertained, and it will be my chief endeavour to elicit as much information as the circumstances of the case will admit, that no false opinions may have been imbibed or even a wish to inculcate them. Much difficulty would appear to present itself in the clear elucidation of the diagnosis between them, but I trust sufficient evidence will be given, to remove all difficulty on the subject. I cannot conceive why it should appear strange, that rheumatism should attack the uterus and the ovaries, when we have evidence that the abdominal muscles, the intestines, according to the Germans, and the tunica albuginea of the testes, according to McLeod, the larynx and the pharynx, have been affected, coming on suddenly, accompanied by an increased degree of heat, great tenderness to the touch, and withal tumefaction; the symptoms shifting and disappearing as suddenly as they made their appearance, and just in the same manner as we observe rheumatism changing from one joint to another, and further, having the heat of skin and pulse bearing a relation to each other—the heat being moderate and the skin soft. It might be asserted that the case of Mrs. McG., which was through metastasis, (as she had been accustomed to have muscular rheumatism,) might not be sufficiently clear, conceiving that metastasis does not take place in muscular rheumatism, but is more properly associated with rheumatism where the synovial membranes are affected; this, however, may be in perfect unison with the meaning of the term metastasis, as being chiefly applicable to tissues of the same character and function, and can be fully sustained by the solution given by Bichat of "affinity of tissues," or by McLeod, of extension of the malady; which I suppose are sufficiently satisfactory proofs that rheumatism may attack the uterus through affinity of tissues. A further point of interest in the case of Mrs. McG., is the sympathetic affection of the brain during the attack, which resembled, in many points, the cases where the brain has been suspected to be engaged when the disease has been located in the pericardium; for it will be noticed that in those cases, simulating disease of the brain where the pericardium had been involved, the brain has only been sympathetically affected, and are not allied to those cases where a metastasis has resulted when the synovial membranes were affected, for in all these cases the patients have died of inflammation of the brain. In all the cases related, with the exception of Mrs. McG.'s, which was thorough metastasis, or affinity of tissues, the principal agent was cold; and I think it may with truth be asserted, that all those causes that form the development of rheumatismal affections, especially atmospherical vicissitudes, metastasis and hereditary disposition, may develop the disease; Wigand and Busch have added, "that as the disease is more frequent during the last months of gestation, it is owing to the exceedingly expanded and attenuated state in which the abdominal muscles are, the peculiar formation of the abdomen protruding the clothes of the females, and permitting more air to pass up to the genital organs." In the case related of Dr. Henschel, and one of my own, the

attack followed a visit to the privy. Such is the frequency of this disease in Germany sometimes, that Welten, in Rust's *Magazin für die gesammte Heilkunde*, remarks that a catarrho-rheumatismal constitution predisposes to it, and that he has seen it epidemic. No fixed period has been noticed when rheumatism may attack the uterus during pregnancy, as the cases will show; it is, however, more especially towards the latter months and the completion of gestation that it occurs, and it will be noticed that the unimpregnated uterus does not escape. It occurs also during labour and in the puerperal state, exhibiting itself upon any portion of the uterus, but more particularly confined to the whole of the organ and its appendages; and, according to Wigand, Moser, Carus, Joerg and Busch, it has its seat in the muscular fibres and their sheaths; it shows itself without any premonitory symptoms, and suddenly, as in like affections of the heart, or presents the precursory symptoms of headache, giddiness, general irritability, with pains occurring in different parts of the body, before exhibiting itself upon the uterus, accompanied with symptoms of fever. The paroxysms are of short duration, only two or three in a day for one day, or for two or three days, and returning no more; or they assume a state of steady irregular contraction during the whole day, and continue, as in the case of Mrs. S., for two months. In its most aggravated character it is attended with fever, hot and dry skin, thirst, quick and tense or full pulse, great tenderness of the abdomen on pressure, the patient laying upon her back and unable and unwilling to be moved, retaining her position during the whole of the attack, fearing if she should move during the remission, the act of moving will renew the paroxysms, and if she is moved, unwilling to resume her former position, the paroxysms being of so severe a nature, and expulsive in their character, as to induce the patient sometimes to believe the child will be delivered every moment; great anxiety of the countenance, and perspiration after each paroxysm, with either a free discharge of urine, or by profuse perspiration. The os uteri is particularly tender, so that the patient will cry out with the intense pain which the touch produces, and even more so than in some aggravated cases of irritable uterus. When the paroxysms have continued any length of time, the bladder and the rectum become engaged, and the usual symptoms incident to those organs show themselves, as in the last stage of labour. A point of some interest, which aggravates the malady, is the movement of the fœtus during the highly irritable and excited sensitive state of the uterus.

An internal examination during the first months of pregnancy, discovers the neck of the uterus, during the paroxysms, very hard, exceedingly tender, and *not dilated*, but in the last months, as it more usually attacks the patients, it may become dilated. Carus, in his *Gynæcologia*, asserts that it is always dilated, which is not sanctioned by Wigand, or Busch, and, as these cases will show, this is not the case unless the contractions have continued some time, when it certainly does become so, and

which I think is amply accounted for, from the neck of the uterus having undergone considerable expansion and shortening during the 7th and 8th months, so much so in some cases of multiparæ, that at the 8th month the finger can be admitted through the neck, and the head of the foetus ascertained; after the contractions the uterus returns to its normal state, provided the disease is mitigated through the treatment adopted. In the cases where not much fever prevails, and where it commences suddenly, it may assume the appearance of natural labour, and by the physician be considered as such, and I have no doubt that some of the cases reported as prolonged gestation may have been of this character. Haase, of Dresden, in the *Gemeinsame Deutsche Zeitschrift für Geburtkunde*, bd. 4, remarks that it may retard the commencement of labour where the disease has before been severe. On this point I would instance the case of Mrs. T.....d, who had arrived, according to her mother's and her own calculation, at the completion of her full term, it being her first pregnancy, and had been in labour for 3 hours when I first saw her. It commenced with slight chilliness, and pains of some activity and severity, and appeared to be severe from the commencement of labour, though no discharge had taken place of blood or liquor amnii. On examination of the uterus, felt the neck high up, opened to the size of a six-pence, and near the sacrum, the abdomen tender to the touch, and the patient laying upon her side, and no willingness or disposition to change her position, as she insisted she felt the child coming down, and nearly born. Matters were permitted to pass on, and at 11 o'clock, P.M., the uterus could be felt opened to the size of a two shilling piece, the head of the child perceptible, and I was certainly under the expectation and belief that delivery would be accomplished by morning; under these circumstances, the labour, as I supposed, was permitted to take its course, and I retired to bed, expecting ere many hours passed, to be called to give her my attention; I was allowed to rest till 6 o'clock; when I awoke, on visiting my patient, I found her in a comfortable sleep, free from pain, and had been so for two hours as the nurse said, and her skin moist. I saw her during the day several times; no pains had supervened, and she passed three weeks further, when I was requested to visit her; she had been in labour for 3 or 4 hours, with regular and steady pains, and the os uteri dilated at this time only to the size of a shilling. M. Caseaux, in his treatise *De l'Art d'Accouchemens*, has remarked that he has seen the neck of the uterus dilated to a-half inch, and the membranes felt engaging, but after the paroxysm they have retired, and the uterus has closed, and the delivery has not taken place. Carus remarks the same, and Welten says that in a case of this kind, pregnant for the first time, and at the 5th month, when pains of labour had already supervened, and the orifice opened so as to admit the finger; the pains were arrested by the means employed, and the next day the uterus was closed, and had lost its sensibility, and the patient did well. Busch also testifies to the same in his

Geburtskunde and his *Geburtshutliche klinik*. It would, therefore, be considered prudent and proper that we should discriminate these cases, and endeavour to allay the contractions, that the consequences of abortion and rheumatic labour may be averted, and we should not suppose because the neck is opened to the size even of a two shilling or four shilling piece, that either of these circumstances will ensue, and not only this is to be averted, but that inflammation may not set in, that convulsions may be prevented, and that, according to Busch, the contractile power of the uterus may not become impaired, by the tissue of the uterus becoming, from the long continuance of the disease, rigid, and the parenchyma harder, so that at the time of labour the uterus will be able to accomplish its normal contractions, and to complete the delivery without assistance either by the ergot or the forceps, and also at this critical period that hemorrhages may not take place, and the life of the female be placed in much jeopardy. Respecting the injury to the child, Joerg has remarked that it is not so deleterious as through inflammation of the uterus, and this, we think, may be true, as the child, in this affection, suffers only from the contractions with the liquor amnii intervening, whilst in inflammation the placenta is frequently attacked, becoming indurated and much altered; or the uterus in some cases becoming softened, and the child perishes. The termination of this disease cannot, therefore, be supposed to be so favourable as has been believed, unless the attacks have been of a mild character, and of short duration; for sometimes the most effective treatment may prove abortive, as in the case of Mrs. S., though the patient has gone to the full period. Should the case prove to be one of a severe nature, and the patient advanced to the completion of utero-gestation, and even continue during labour, all the terminations of the disease are to be feared, such as hemorrhages after delivery, artificial delivery, and the application of the forceps. Having passed in review the principal points relating to this disease, I shall as succinctly, and as clear as I possibly can, endeavour to draw the line of demarkation between this disease, and those more nearly allied to it, hysteritis, neuralgia, spurious pains, and natural labour.

Of all the diseases, muscular rheumatism is that which is most nearly allied to neuralgia; it is in effect purely painful, having its seat more or less superficial, and giving rise frequently to exacerbations or paroxysms. If we consider that both consist simply of pain—though varying somewhat in their similitudes in this respect—that they are produced by the same circumstances—that they frequently exist together in the same individual, and, above all, that they may be followed and replaced by each other in an evident manner—we should believe that the maladies were the same—and that the location of the disease was alone different. To the practitioner, they may be considered as the same, but to the pathologist they are essentially distinct affections. Neuralgia of the uterus being more generally periodical in its character, having a long remission, though sometimes the attack assumes

the form of paroxysms, and they are of longer duration—and may become continuous, without any fever, having an acute, lancinating character, and being more chiefly confined to certain points, such as the lumbar, iliac, hypogastric, inguinal, and, according to M. Bassereau, (*Essai sur le Neuralgie*, Thesis, 1840), fixed upon the side of the neck of the uterus where these points are the most conspicuous, the pains not of an expulsive nature—the patient able and willing to move—the abdomen not very tender to pressure except on these points, and over the uterus; the anxiety of countenance not so great; and after the paroxysm or paroxysms no perspiration or discharge of urine resulting. Hysteritis seldom comes on suddenly, and then not in paroxysms; there is always fever; hot and dry skin; thirst; the pain is continuous, and chiefly on the lower portion of the abdomen; the tenderness confined to this point, and, if severe, becoming more diffuse; and should the fever not be subdued, it may proceed to softening of the organ.

Spurious pains, it must be acknowledged, are of frequent occurrence among females during gestation, and they sometimes continue to harass the patient for days and weeks, antecedent to labour, and there is no question that they are frequently taken for genuine contractions; still, we conceive their distinctive characters are well marked, generally supervening during the night and terminating by morning, erratic in their nature, the pains being principally in the upper part of the back and loins; a want of regularity in their appearance; the intervals sometimes very long; the patient restless; able to move from place to place; not fixed in her position; and the pains seldom attacking the uterus, and should they do so, they occupy principally the circular fibres of the fundus; and Wigand (in his *Die Geburt des Menschen*, p. 197, vol. ii.) says, “when the pains thus attack the fundus they very seldom pass into the cervix and os uteri, and become genuine expulsive pains; there is a want of tenderness; no anxiety of countenance; and no perspiration generally after the pains; and an internal examination discovers the neck of the uterus not acted upon, soft and of its natural feel.”

In natural and actual labour there is not much tenderness, except during the last stage of a severe labour; no anxiety of countenance; the patient is able to move in any direction except when the pain is in force, and which produces a low, moaning, suppressed cry, and not crying with its agony; the pains coming on regularly, commencing at the os uteri, and passing to the fundus, and in a few seconds gradually increasing in power till they have reached their acme, and then gradually subsiding; but the pains become more and more severe and longer, acquiring their highest degree of activity at the *last* stage of an expulsive and protrusive character, and not at the commencement, and results in the birth of the child, and the uterus returning upon itself, opposing itself to hemorrhages. Excessive and expulsive pains *never* coming on (the head may be ever so low in the pelvis),

so long as the os uteri is not fully dilated, (Wigand, p. 310, vol. ii.,) and even should expulsive pains come on when the head is pushed down deeply in the pelvis, even to the very outlet, and when the os uteri is but little dilated, and is protruded before it, even in such cases we never see the really painful and expulsive action ensue, but as soon as the os uteri (perhaps often much suffering), has retracted over the head, severe protrusive and expulsive pains take place.—*Ibid.*, vol. ii. p. 467.

Having now glanced at these different points, I shall present the principal points of diagnosis of rheumatism of the uterus, and its termination as differing from the preceding affections, taking place frequently suddenly in paroxysms of a severe acute character, soon becoming *expulsive*, of many minutes duration; not long remissions; and confined to the whole of the uterus, and seldom to the back; the contraction firm and hard, inducing the patient to scream out through her sufferings; the position of the patient upon her *back*, *unwilling* and *unable to move*; the slightest excitement of the uterus producing a sensation of pain; much tenderness of the abdomen and diffuse; great anxiety of countenance from the first; free perspiration after the pains, and when the disease is about ceasing, either terminating in a profuse perspiration, or the discharge of urine; and should the paroxysms become more severe and not pass off, and the disease continue, metritis may ensue with the usual train of symptoms, which may render the case exceedingly difficult and painful; or the disease by its long continuance may expose the uterus to irregular contractions, and be a cause of difficulty in the delivery; and after delivery, the contractions may be so incomplete, that the fibres, through the long duration of the disease, become harder and more rigid, losing their contractility and giving rise to hemorrhages.

The treatment pursued must be adapted to the nature of the case. Should it be of a mild character, cathartics should be given, followed by diaphoretics; and I have given the preference to the pulv. Doveri in ten or fifteen gr. doses every two or three hours, which is highly recommended by Joerg, with emollient applications to the abdomen, or the application afterwards of the emp. belladonna to the abdomen, or applied to the os uteri after the method of Madame Lachapelle.

Should the case be of a severe form, and inflammation dreaded, the antiphlogistic means are to be put in requisition, accompanied by diaphoretics and sedatives. Should inflammation ensue, the course of treatment for that disease is to be adopted. Should the attack result from affinity of tissue or metastasis, revulsives ought to be applied upon the point primitively affected; and should any particular circumstances occur during labour to interfere with its advancement, and the female appear in danger, we must resort to version, if the child is high up, and the uterus dilated sufficiently; or, if the child is low down, the forceps.

ART. V.—*Medical and Surgical Cases.* By GEO. C. BLACKMAN, M. D.,
Newburgh, Orange co., N. Y.

CASE I. *Extra-Uterine Fœtation.*—On the 19th February last, in company with my friend Dr. Schenck, of Fishkill, I visited a patient under his care, whose history, as related by Dr. S., was of great interest. Some 18 months before our visit, the patient, a coloured woman, æt. 35, had informed the doctor that she was pregnant, and about the 9th month of her pregnancy. She experienced most of the symptoms of incipient labour. These, however, were of short duration; and Dr. S. heard nothing more from the woman until about the 15th February of the present year, when his assistance was requested for the extraction of a *tape-worm*, which was protruding from the anus. After a close inspection of the parts, Dr. S., much perplexed as to the nature of the protruding mass, removed it with the scissors. Much to his surprise, it proved to be the foot and leg of a full-grown fœtus, which he had removed at the knee-joint. The thigh of the child was also without difficulty extracted. In a moment, the doctor recalled to mind the facts connected with the early history of the case as before related, and formed a correct diagnosis. The body of the child could be distinctly felt, lying across the abdomen; and although nature was making an effort to discharge it by the rectum, it was evident, from the appearance of the woman, that she must soon sink exhausted. The bowels were obstinately obstructed, and she was unable to retain any nourishment on her stomach. Knowing that Drs. McKnight, J. Augustine Smith and others, had operated on similar cases with success, we resolved, with the patient's consent, to lay open the abdomen, and, if possible, to extract the child. She was made fully to understand, that in her low condition, the operation offered but little encouragement; but small as it might be, we felt it our duty to give her the chance. She replied, that she knew if not soon relieved she must die; and she was ready to submit to any thing that would give her the *least* prospect of life. With the assistance of Dr. S., and my friend Dr. Paine, of Newburgh, I made an incision through the linea alba, which extended from a short distance below the umbilicus to the pubes. The protrusion of the intestines was prevented whilst I introduced my hand to examine the connections of the child. It was enveloped in a sac, through which a small incision was made. It proved to be highly vascular, and there followed a considerable discharge of blood. We were unanimously of opinion, that an incision of sufficient extent to remove the child, would place the life of the woman in immediate danger, and, much to our regret, were compelled to abandon the operation. The wound was closed, and an anodyne administered, the greater part of which was not rejected. Although the patient, as she her-

self remarked, suffered but little from its performance, she continued to sink rapidly, and died some 40 hours after the operation.

Post-mortem.—The wound was re-opened, and an incision carried to the sternum. All traces of the omentum had disappeared. The small intestines appeared unusually large, were agglutinated together, and adhered firmly at various points to the sac containing the child. From the transverse arch to the sigmoid flexure, the colon had become greatly diminished in size. On laying open the sac, which was about one-third of an inch in thickness, we found a full-grown fœtus in a very putrid condition. The fetor for some time was absolutely intolerable. At the sigmoid flexure of the colon, there was a large perforation, through which the leg of the child had been discharged. At several points, where the small intestines adhered to the sac, the process of ulceration had already commenced. Although the woman had borne several living children, the uterus was remarkably small and perfectly healthy. It adhered by the whole of its posterior surface to the sac, and no traces of the Fallopian tubes or ovaries could be discovered.

CASE II. *Scirrhus of the Colon.*—On the 12th January, 1845, I was requested by Dr. Paine, of this village, to visit a gentleman, who for 48 hours had been labouring under all the symptoms of intestinal obstruction. The particulars of the case, for which I am indebted to Dr. P., are as follows:—The patient, æt. 35, about ten years since suffered from a severe attack of intermittent fever. From that period he has occasionally experienced a sensation of fullness and uneasiness in the left hypochondrium. For the last two or three years, he has also been affected with anal hemorrhage and a burning sensation in his stomach. Several weeks before the present attack I saw him with Dr. P., and, from the fullness in the region of the spleen, dullness on percussion, and after a careful examination of the thoracic organs, in which we could detect nothing abnormal, we arrived at the conclusion that he was labouring under a chronic congestion of that organ. He was freely cupped in the affected part, from which he derived considerable benefit. He still continued, however, to complain much of borborygmi, often observing, "that it seemed as if there were a volcano pent up within him." On the morning of the 12th, when I first saw him for his present difficulty, there was violent retching and vomiting, and the abdomen was tender and tense; pulse 125. Cathartics and enemata, judiciously administered by Dr. P., had produced no effect. He was freely cupped in the epigastric and left hypochondriac regions. Sinapisms were applied over the abdomen and the enemata repeated.

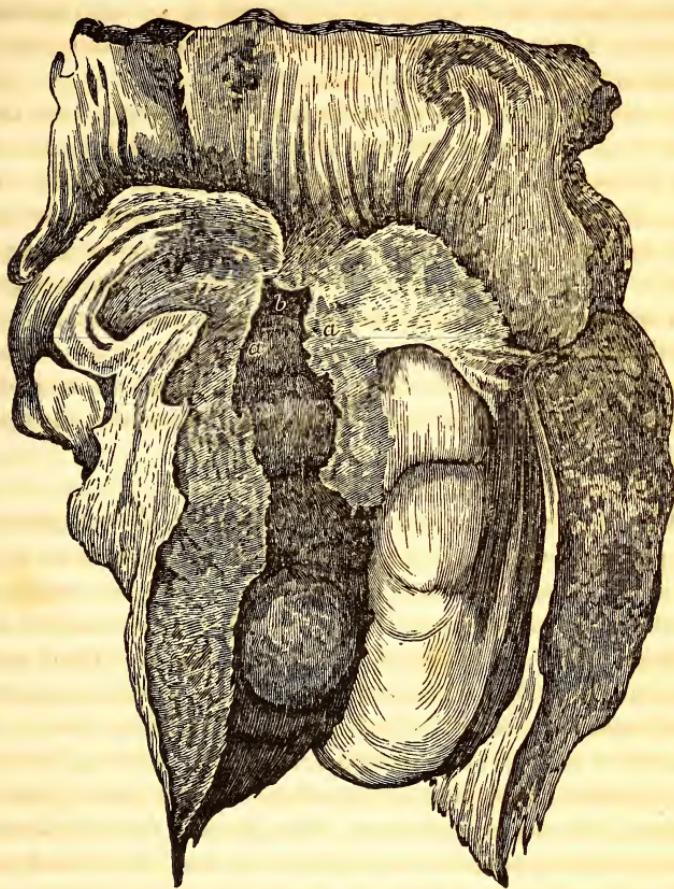
Jan. 13th. No change for the better. Inability to retain any thing on his stomach. Intense burning in the latter organ and the œsophagus. Convulsive action in the right arm. Passed a hollow bougie up the rectum, through which large enemata were administered. Cups repeated.

During the day he took calomel 40 grs., and croton oil $\frac{1}{2}$ xi, which produced much pain, but no evacuation.

14th. Vomiting of fecal matter; abdomen more tense; pulse 130. Applied 16 leeches, which brought on great prostration, but relieved the tenderness. Passed the tube 18 inches up the colon and gave another large enema without effect. Vomiting of fecal matter continued several times a day until the 17th. Thirst somewhat alleviated by the application of ice water to the lips and a wet cloth to the throat. Supported entirely by injections of nutriment and anodynes. Violent cephalalgia at times with photophobia. No particular change occurred until the 22d, when we noticed a distinct elevation in the right iliac region. The introduction of the tube brought away some fetid gas. Enemata returned unchanged. For several days the patient refused to submit to any further treatment, and nothing was done with the exception of an occasional application of croton oil endermically. Tympanitis and debility continued gradually to increase. On the 21st day of his disease, he consented to take half a pound of quicksilver. This was given with much apprehension, as, for many days he had been unable to swallow even a spoonful of water. To our surprise, it excited not the slightest nausea or uneasiness, and, in little more than an hour he began to discharge large quantities of flatus, which afforded him much relief. For the next four days he was rather more comfortable, and on the 5th and 6th he had several evacuations of fecal matter, accompanied with great pain. In the first motion there was a large quantity of dark coagulated blood. On the 26th day from his attack we began to feel highly encouraged at the appearance of our patient, who partook freely of soup, brandy and water, &c. His pulse became reduced from 130 to 96 per minute. On the night of the 27th day, however, matters began to look more unfavourable. There was difficulty in urinating, and we were obliged to use the catheter. We may here observe, that up to this period, his urine had been free and abundant. After the exhibition of the quicksilver, it was of a peculiar smell and colour evidently arising from that substance. About midnight of the 27th he complained greatly of the pain in his abdomen, and stated that it was more severe than ever. His pulse soon became almost imperceptible, cold clammy sweats with great prostration succeeded, and he died at noon, on the 28th day from his attack.

Post-mortem.—We examined his body about 4 hours after his death. Emaciation considerable; abdomen tympanitic. On opening its cavity we found traces of inflammation throughout almost the whole of its extent. Large quantities of sero-purulent matter, mixed with another dark substance as if effused from the intestines. The descending portion of the colon was greatly distended with air, and at the left part of the transverse arch the bowel was contracted, whilst the portion above was filled with fecal matter, but yet smaller than the part below. About 3 inches of the left portion of the transverse arch of the colon was removed, and, on laying it open, it

presented the appearance as seen in accompanying figure. The canal was blocked up with the scirrrous mass, so as to admit with difficulty the extremity of a goose quill, fig. *a*. At its left extremity was a perforation large enough to admit the little finger, fig. *b*. The effusion through the opening had un-



doubtedly produced the sudden and alarming prostration observed a few hours before his death. The ileo-cœcal valve was normal. At the lower part of the ileum, at about six inches from its junction with the cœcum, we found a small quantity of quicksilver, probably one-third of that administered; the stomach was enormously distended with air; spleen rather large and hard; nothing abnormal in the other viscera.

CASE III. *Absence of the Uterus—obliteration of the Vagina.*—About the middle of March, 1844, a female came under my care, labouring under a complete adhesion of the walls of the vagina and an absence of the uterus. She was 22 years of age, of a masculine appearance, and stated that she had always menstruated by the month. Her menses commenced at the usual time, and the discharge occurred regularly every month. She

had been twice married, but was abandoned by both of her husbands on account of her peculiar condition. Her sexual desires were strong, and she was exceedingly anxious to submit to an operation, for the restoration of the vaginal passage. This, she thought, was once natural, and she attributed the adhesions to excessive indulgence in sexual intercourse, in her 16th year. There was a small projection in the situation of the clitoris, having somewhat the appearance of that organ.

Having placed her in the usual position for lithotomy, with the labia separated by an assistant, I carefully dissected the parts from the meatus urinarius backwards between the bladder and the rectum to the extent of 4 inches. It was one solid mass, and there was no cicatrix, neither was there any appearance to lead us to believe that the vaginal passage ever had existed. The operation was followed by considerable hemorrhage. The dissection terminated in a cul-de-sac, and after the most careful examination with the fingers and probe, not the slightest trace of an uterus could be found. A tent was introduced to keep the parts dilated, and, although some contraction of the parts again took place, months after the operation, she stated that it had fully realized her expectations.

CASE VI. *Large Abdominal Tumour—favourable termination.*—In the early part of Dec., 1844, I visited with Dr. Houghton, of St. Andrews, a female in his vicinity, who was supposed to be labouring under ovarian dropsy. She was about 40 years of age, and her attention was first directed to the enlargement of her abdomen, some 2 years before. There was a distinct fullness in each iliac region, and a still greater enlargement in the left hypochondrium, the nature of which it was impossible to decide. At one time, she was supposed to be affected with ascites, and the physician formerly in attendance, had proposed to perform the operation of paracentesis. This, however, was not accomplished. She observed that the iliac tumours had commenced with pain, but in the other she had experienced no uneasiness with the exception of that occasioned by its bulk, which was that of the ordinary size of an adult's head. Her sister had recently died of ovarian dropsy, and from all that we could learn of the history of the case, and after a careful examination of the parts per vaginam, &c., we were forced to the conclusion that she was affected with the same disease. In relation to the tumour in the upper part of the abdomen, we were unable to say whether it was the spleen in a state of suppuration, or whether it was connected with iliac tumours, as the development of all was nearly simultaneous. Her strength was rapidly failing, and she despaired of recovery. Our prognosis was, of course, unfavourable. We directed that she should be placed under the influence of iodine both externally and internally, and the electro-magnetic battery. The following extract from a letter which I received a few days afterwards from Dr. H. will show the progress of the case. “On the 3d day after the use of the battery and other means, the

tumour over the spleen gave way, and at once discharged by the rectum a gallon of pus, as stated by the patient and friends. I had previously operated over the tumour with the full power of the machine. Chills and considerable excitement with some pain followed, and I concluded to desist from the use of it for a few days. The result followed as stated, and, in my absence, the physician formerly in attendance was called. The two iliac tumours remain the same, and she is very much prostrated. Her case will probably terminate unfavourably. The action of the machine most likely hastened the bursting of the tumour. There is a daily discharge of pus per anum, to what extent, I cannot say; but from accounts it must be considerable, say 18 or 20 ounces." Some two weeks after the commencement of the discharge per anum, I visited the patient, who corroborated Dr. Houghton's statement. She observed that on the day before my visit, the discharge had ceased; the iliac tumours had also subsided. She was very much exhausted but her appetite was good, and she was under the liberal use of tonics. By the judicious subsequent treatment of her family physician, (Dr. Fowler, of Walden,) this lady has regained her health, and, as I have been recently informed, is now able to perform her domestic duties. When I last saw her, the appearance of her abdomen was perfectly natural.

ART. VI.—*Experiments to determine the Physiological effects of Conium Maculatum.* By PLINY EARLE, M. D., Physician to Bloomingdale Asylum for the Insane, New York.

THE conium maculatum, in the form of extract or inspissated juice, is somewhat extensively used in general practice; and, being considered, as it unquestionably is, a narcotic, is not unfrequently prescribed as a *soporific*. Having for several years been accustomed to the free use of this preparation in the treatment of insanity, without ever procuring sleep as its effect, even in doses gradually raised to sixty, eighty and ninety grains, three times in the day,—and having not long since heard an eminent physician, who prescribes for his patients "nearly a hundred dollars worth" annually, express a doubt that this extract has "any medicinal virtues whatever," I determined to ascertain, by self experience, the nature of its immediate effects upon the human system.

On the first of January last, I commenced taking an extract prepared by Lee & Butler, of Hartford, Connecticut. The following schedule exhibits the results of the experiment.

<i>Jan. 1st</i> ,	took 1 grain 3 times;	morning,	noon	and evening.	
" 2d,	took 2 grains 3 times;	"	"	"	
" 3d,	took 3 grains 3 times;	"	"	"	

Had some headache in the region of the temples, attributed to a slight cold.

Jan. 4th, took 4 grains 3 times ; morning, noon and evening.

“ 5th,	“ 5 grains 3 times ;	“ “ “	Slept 7½ hours.
“ 6th,	“ 6 grains 3 times ;	“ “ “	Slept 8 hours.
“ 7th,	“ 7 grains 3 times ;	“ “ “	Slept 6½ hours.
“ 8th,	“ 8 grains 3 times ;	“ “ “	Slept 8 hours.

Had a slight pain from temple to temple several times, during the day.

Jan. 9th, took 9 grains 3 times ; morning, noon and evening. Slept 8½ hours.

“ 10th, “ 10 grains 3 times ; “ “ “ Slept 7½ hours.

“ 11th, “ 12 grains 3 times ; “ “ “ Slept 8 hours.

A slight, dull pain through the anterior portion of the head, with “ringing in the ears ;” probably caused by temporary indigestion.

Jan. 12th, took 14 grains, morning, noon and evening. Had a headache in the forenoon, which, upon taking soda bicarb. ʒss. was relieved. Slept 7¾ hours.

Jan. 13th, took 16 grains morning, noon and evening. Slept 7½ hours.

“ 14th, “ 20 grains “ “ “ Slept 7½ hours.

“ 15th, “ 25 grains “ “ “ Slept 7½ hours.

The morning dose was taken as usual, before eating. While at the breakfast table, I felt a disagreeable sensation, like the “fullness of the head” occasioned by a ligature around the neck. This was accompanied by a very slight vertigo.

These effects were not perceived after either of the subsequent doses taken this day. Slept 7½ hours.

16th, morning ; took 30 grains ; effects not so great as yesterday morning. 10 o'clock, P. M., took 40 grains upon an empty stomach. It was followed by a greater tendency to vertigo than before, with a sensation as if the eyes were swollen and unnaturally protuberant. Evening, took 40 grains two hours after supper. Similar effects, but in a slight degree, and less than on the morning of the 15th, with 25 grains taken fasting. Slept 7½ hours.

17th, morning ; 15 minutes before sitting to breakfast, took 45 grains. While at the table, the sensations of fulness of the head and tumefaction or enlargement of the eyes, were uncomfortable and oppressive. The eyesight slightly dim, became more so upon rising from the table, and the tendency to vertigo was at the same time increased. There was a feeling of mingled weariness and weakness in the knees, and the gait was not so firm as usual. Pupils of the eyes apparently somewhat dilated. 1 o'clock, P. M., took 45 grains soon after eating an apple. In 15 minutes there was a sensation of heat in the gastric region, followed by symptoms similar to those just described, though not of nearly so great severity.

Evening ; took 45 grains. Effects much the same as at 1 o'clock. Slept 7½ hours.

18th. Morning, took fifty grains ; vertigo commenced in 20 minutes, and in 30 minutes the dimness of vision and peculiar sensation in the knees already noticed. I now felt, for the first time, the sensation last mentioned, in the lower part of the *biceps brachii* muscle. I particularly studied this feeling and can give no idea of it except by comparing it, as already done, to a mixture of weariness and feebleness or debility. It was not unpleasant, and there was a constant disposition to flex and extend the forearm. Pupils apparently dilated. 10 o'clock, P.M., took sixty grains. 10 minutes afterwards, the warmth in the gastric regions was perceived, and in 15 minutes cerebral symptoms commenced. In 35 minutes the action of the medicine appeared to have reached its maximum, which it maintained about fifteen minutes, with the sensations in the head, elbows and knees already described, and to a greater degree than after any dose previously taken. In 1½ hours from the time of taking it, its apparent effects had entirely disappeared. 9½ o'clock, P.M., took sixty grains after eating apples. The action was less powerful than in the middle of the day. Slept 6½ hours.

19th. Took sixty grains 12 minutes before breakfast. In 35 minutes all the symptoms before mentioned were felt, to a greater extent than at any previous time. Vision was, for the first time, double. Directing the eye to an object at the distance of 15 feet, that object, for a moment would appear single. Immediately, however, two images became visible and slowly receded from each other to the apparent distance of about 6 inches. Here they generally became stationary, but at times would continue alternately to approach and recede from each other. Upon going up stairs, the knees were so weak as to render the ascent very difficult without assistance by taking hold of the balustrade. Pupil apparently dilated. 2½ o'clock, P.M., took sixty grains immediately after dinner. The influence of the dose was far less than of that taken in the morning. 10½ P.M., took sixty grains just before going to bed. The effect was greater than in the middle of the day, but less than in the morning. The recumbent position might have had some influence in diminishing the appreciation of this effect. Slept 7½ hours.

20th. Took sixty grains immediately after breakfast. Less affected by it than yesterday morning, although a slight degree of double vision was experienced, together with all the other symptoms heretofore mentioned. One o'clock, P.M., took sixty grains after a "lunch." Effects about the same as in the morning.

Seven successive doses, of sixty grains each, had now been taken, with the intention of farther increasing the quantity. Having, however, satisfied myself of the properties of the medicine, and believing the experiment to have been carried as far as prudence would dictate, I determined forthwith to stop. In the evening, a glass of currant wine was substituted for the

medicine, and I did not feel either at that time or subsequently, any unpleasant effects from the immediate suspension of the latter. Aware of the fact that the extract of conium imported from Great Britain, is generally (though with many exceptions) believed to be superior to that of American production, I resolved upon testing its strength.

Having procured a quantity of the latest importation bearing the mark of Mander, Weaver & Co., Wolverhampton, I commenced taking it on the 1st of February, ten days after the termination of the trial of the American extract.

Commencing with one grain, three times in the day, the dose was increased by one grain every morning, as in the former case, until the 10th of the month, and, subsequently by two grains, until the 13th, when it amounted to sixteen grains *ter in die*. At that time no sensible effects were, or had been perceived. From the 8th to the 13th, the daily time of sleep was $7\frac{3}{4}$, 8, $7\frac{1}{2}$, 7, 8, and $7\frac{1}{2}$ hours successively.

14th. Took twenty grains, three times. Slept 5 hours.

15th. Took twenty-five grains, three times. No sensible effect. Slept 7 hours.

16th. Morning, took thirty grains; mid-day and evening, forty grains each. Slept $8\frac{3}{4}$ hours, "making up" for the loss of sleep on the 15th.

17th. Took forty-five grains three times. Slept $7\frac{1}{2}$ hours.

18th. Took sixty grains in the morning, and seventy each at mid-day and evening. The first apparent effect was at noon, this day, and was to about the same degree, and of precisely the same character of that of the American extract, on the 15th of January, in a dose of twenty-five grains. Slept $7\frac{1}{2}$ hours.

19th. Took eighty grains in the morning, ninety grains at noon, and one hundred grains in the evening. I had some headache, with diminution of appetite, throughout the day, and consequently ate very little at supper.

The evening dose, taken after several hours fasting, and its influence augmented by the cephalgia, affected me more unpleasantly than any former portion during either trial. There was double vision, but not to the same extent, nor of so long duration as with the last doses of the American extract. The same remark is applicable to the sensation in the elbows and knees. The cerebral oppression, however, was extremely unpleasant and oppressive. The pulse, during the period of greatest influence, and while I was sitting, beat with undeviating precision, 60 strokes in a minute. This is, perhaps, two or three beats below its natural velocity when the body is at rest. It was also fuller and stronger than usual. It might have been modified by the general condition of the system on that day, but this influence would probably have increased its rapidity.

Some writers attribute diuretic properties to the conium. There was no perceptible augmentation or diminution of the urine during the course of

these experiments. On two occasions, once after taking one of the largest doses of the American, and once after one of the largest doses of the British extract, I felt an acute, lancinating, and transient pain in the region of the neck of the bladder, similar, as I suppose to strangury. Having never experienced a sensation of the kind, either before or since, I believe it to have been caused by the medicine.

The size of the pupils was judged of only by comparison with those of the eyes of other persons at the time. This criterion not being altogether accurate, it is impossible to determine whether actual dilation was produced by the medicine. Even if it were, this effect was very slight.

The phrase "tendency to vertigo" has here been used, in preference to the word vertigo, simply because this effect, thus described, was not sufficient at any time to destroy the ability to walk straight. The instability of the gait was, or appeared to be principally owing to the effect upon the muscles in the vicinity of the knees.

ART. VII.—Remarks on the Climate, Diseases, &c., of Middle Florida—particularly of Gadsden county. By ROBERT EDMONDS LITTLE, M. D., of Quincy.

GADSDEN, one of the most northern counties of Middle Florida, extends from the Georgia line on the north, to the Gulf of Mexico on the south, a distance not far short of one hundred miles,—while its eastern and western boundaries are the Apalachicola and Ockoloknee rivers.

The northern portion of the county (the part most densely populated), is watered by numerous streams of considerable magnitude, the principal of which, beside the above named, are Little river, Willacoochee, Tellogee and Rook Comfort creeks. Their banks are low and often so boggy as to cause it to be necessary for the road over them for the distance of several hundred yards to be elevated, so as to render the stream approachable. These waters are clear and usually not unpleasant to the taste. The face of the country is for the most part rolling—especially the rich portions of it in the neighbourhood of the hammocks,* while the pine lands are tolerably level; the former fertile, producing in abundance all the great staples

* The word hammocks is applied indefinitely in many parts of the territory; in one quarter it is used to signify "a thickly wooded place;" in another "a mound raised out of a swampy tract of land;" and again it is supposed to be a corruption of Tomaka, the Indian name for a river whose banks are covered with hammocks or swamps. Webster derives it from the Spanish word hamucu, referring to the beds used by sailors, and as the soil of which these hammocks are composed seems to be raised above the surrounding water.

of the climate,—the latter are poor and little adapted to cultivation unless manured, being principally used as ranges for cattle, of which many of the planters possess an immense number. The hammocks are covered with a growth of cane, oaks, hickories, poplars, sweet gums, red bays, magnolias, &c., and vary in width from fifty yards to a mile—the soil of which they are composed is a black loam, based upon a bed of clay. In passing over the country the traveler frequently meets with barrens, dotted here and there with stunted oaks, pines, and prickly pears, which, however, are soon forgotten in beholding beautiful plains, shaded by stately pines; now and then green mounds, the receptacles of the dead—and not unfrequently a glassy pond, whose sparkling waters are so many mirrors reflecting the beautiful verdure of the live oaks which dip their wide-spreading branches far over its banks. In the early settlement of the country when land was easily obtained, no care was taken to prevent a deterioration in fertility—hence many fields are now lying in a waste condition, not worth cultivating, which will, however, in the course of a few years be entirely renovated and capable of producing as well as formerly,—no land in the world being more susceptible of improvement by rest.

The great staple of Middle Florida is cotton—but since its depreciation in value, many of the planters are turning their attention to the cultivation of tobacco, a species of which is produced in many portions of the district, almost equal to that of Cuba. Rice and sugar cane grow well and are cultivated in quantities sufficient for domestic use;—the latter might be made an article of considerable revenue, as the soil and climate seem to be peculiarly adapted to its cultivation. The fig and orange arrive at perfection, and with care might be rendered a source not only of luxury, but profit. From the slips they bear fruit in a very few years, and the only attention necessary to bestow on them, is protection from the frosts of winter until they are matured. The apple, pear, cherry, grape, gooseberry, and currant are unsuited to the climate, seldom arriving at perfection—while the peach and melon flourish, affording during the summer an abundance of agreeable fruit. The long continuance of warm weather prevents a proper attention being paid to gardening, yet so mild are our winter and spring months, that almost every article usually found in gardens in more temperate climates is capable of being produced in profusion. The Irish potatoe, onion, and cabbage, degenerate after the first year's cultivation—their produce being small and of unnatural flavour, while the sweet potatoe furnishes a considerable portion of the population with an agreeable article of food, the soil being very favourable to its production.

The flora of Middle Florida is peculiarly rich in the variety and beauty of species, the surface presenting one vast bed of flowers. And no portion of the American Continent is so plentifully supplied with insects and reptiles as is this “land of flowers.” In rambling through the woods scarcely a leaf can be turned, or brush disturbed without breaking in upon

the slumbers of some “creeping thing,” whilst at night, during the summer season, our ears are assailed by the buzzing of myriads of mosquitoes in their *murderous* attacks upon those of us who are so unfortunate as not to have provided bars as a means of defence. So formidable are their stings, that cattle and deer are often compelled to leave the swamps, and take up their residence in the pine woods to avoid them.

In all parts of Florida is to be found a species of land tortoise, called the Gopher (*Gouffre*, French), (*Testudo Polyphemus*). Alligators of large size are numerous, and on the banks of the Apalachicola, on a bright day, hundreds of these monsters are to be seen basking in the rays of the sun, ready to pounce on any prey that may be so unlucky as to be accidentally thrown in their way or so hardy as to approach them.

Of the feathered tribe we have a great variety—especially aquatic—the most prominent of which is the large wood pelican; an awkward bird in its movements on land, but when placed upon its congenial element, graceful. Large droves of the paroquet are seen, a noisy but beautiful bird, singularly graceful and rapid in flight.

As objects of greater interest to the sportsman, various quadrupeds are found in a wild state. Luxuriant in vegetation, the territory affords ample opportunity for the hunter to indulge in the exciting chase after deer, and for the hardy woodman to hunt bears. Wolves and panthers are numerous, frequently proving troublesome to the settlers.

Of the climate of our American Italy much has been said, and situated as Florida is, in the southernmost part of our great confederacy, for years past it has been looked to with the hope of its possessing a climate capable of affording relief to those afflicted with diseased lungs, scores of whom annually leave their northern homes but to languish and die on a foreign shore. Whether this hope is likely to be realized or not, time alone can certainly determine.

Warm weather usually makes its appearance about the middle of April, and continues with but little variation until the last of September; when the mornings and evenings begin to grow pleasantly cool—although the weather remains at mid day warm until November is ushered in. During the last two months of the year, the days are pleasant; but few blasts of cold weather sweeping across the land to remind us of overcoats or cause us to desire to exchange our pine knot for the anthracite fires of our northern friends. Although hot weather is of long continuance, the thermometer seldom indicates a temperature higher than 95°, the mean heat of January being 55°, of July and August 87°; and of November and December 53°. At this point (Quincy inlet, 30° 40') a breeze from the Gulf of Mexico is generally felt about ten in the morning—which continues until late in the evening, thus mitigating considerably the heat of summer and rendering our almost tropical clime not only endurable, but pleasant at a time when the inhabitants of a more northern region are sighing for the zephyr's

breath to stir the dormant, sultry atmosphere with which they are surrounded. Our nights in summer are cool, especially towards the latter part,—so cool, indeed, as not unfrequently to make it necessary to add a blanket to the usual articles of clothing. In summer, droughts of long duration are not uncommon—much to the injury of the planting community. The spring months are those most usually productive of rain, which falls not gently for a few hours, but in torrents, and for whole days with such impetuosity as to have gained the distinctive name of “Florida rains.” As the banks of the water courses are low, they are easily overflowed; the rush of waters sweeping every thing before them, fences, bridges, &c. nothing being safe from their desolating influence. Such was the case in the spring of last year. For three days the rain fell in such torrents as to darken the atmosphere, rendering it almost impossible for a man to be recognized at the distance of twenty steps. The streams were carried far beyond their banks; lagunes overflowed; roads rendered invisible; in short, the appearance of the whole country was changed. Traveling was suspended for weeks; as well as intercourse between neighbours; all waiting for a subsidence of the waters and rebuilding of bridges, many of which were swept away—all injured. Rains are usually succeeded by pleasant weather, the surface of the country drying in the course of a few hours, the soil being very absorbent.

The summer winds generally come from the south and west, and when these are accompanied by clouds, rain is pretty sure to follow; while northern winds seldom precede or attend rain. From our proximity to the Gulf of Mexico, tornadoes are not unusual. The one which occurred in the fall of eighteen hundred and forty-three will be long remembered, because of its violence and the destruction of property caused by it. Port Leon, St. Marks, and most of the settlements on the Wakulla were destroyed. The gale commenced in a gentle breeze, causing but a slight agitation of the waters and rustling the leaves; gradually it increased, the waves began to lash the banks and the trees to bend; and after a time to be prostrated, unable to withstand the fury of the enraged elements. Time only served to add strength to the winds, and they ceased only when every thing had fallen before them. Gales such as that alluded to seldom occur in this region, although almost every spring and fall are attended by storms of considerable violence.

Our coldest months are December and January. The past was the most severe winter experienced in Middle Florida for the last twenty years; in several instances the small pools of standing water caused by the hoofs of horses, were frozen over and remained so until nine o’clock in the morning. Snow has fallen but twice in the last eighteen years, and then only in quantities sufficient to give the ground here and there a white appearance. Atmospheric changes are frequent, the mercury falling and rising again 15° to 25° within a few hours; but fortunately the cold *spells* last but

a few days at a time and are succeeded by weather most delightful to the invalid ; although the changes are sudden, there are but few days in winter so unpleasant as to prevent the valetudinarian from taking necessary exercise in the open air either on foot or horseback. As before remarked, an opportunity is seldom wanting in winter to indulge in the chase after deer, or the less fatiguing sport of hunting wild turkeys.

In the villages, the accommodations for the sick are good—the hotel tables being bountifully supplied with all the delicacies of the season, a circumstance heretofore much complained of, to say nothing of the exorbitant charges of the worthy Bonifaces of our land.

Separate and apart from the evidence of meteorological registers, we are strongly inclined to the opinion that the climate of Middle Florida presents inducements as a winter residence to those who are predisposed to, or have already contracted tuberculous affections in a northern latitude (provided they are not far advanced), equal to any portion of the eastern division of the territory ; taking into consideration the influence of good society—accommodations, &c. Towards the permanent restoration of advanced cases nothing can be done ; such we would advise to remain at home and not to seek a grave in a strange land.

A common opinion prevails at the north, not only among the uninformed, but even among physicians, that consumption is a disease that rarely originates in warm climates, an opinion not more common than erroneous. In the southern country tuberculous diseases are often met with, not the result of colds—but of the long continuance of warm weather and the use of food almost entirely vegetable, circumstances tending to produce a debilitated state of the system. This cause is not liable to operate with the same force upon natives of a northern as upon those of a southern region, the former, reared in a climate whose tendency is to invigorate the frame and render it capable of enduring for a number of years the debilitating influence of warmth, resist phthisis for a great length of time, while the latter, subjected from infancy to a high temperature, early fall victims to tuberculous cachexy upon the occurrence of even the slightest agent in its production.

The prevailing diseases of this portion of the southern country are those which are supposed to have a relationship or connection with that peculiar agent termed malaria, and our territory is rich in all the elements favourable to the elimination of this poison, viz : vegetable matter in a state of decomposition ; high temperature and moisture ; a union of all these being necessary, or either alone being capable of generating it, while a superabundance of the latter, moisture, although the other constituents are in exact proportion, prevents its formation. No fact is better known in the southern country, than that for the first few years after the settlement of a particular district, its inhabitants are more exposed to disease than in after years, because of the evolution of miasm in large quantities, caused by the felling of the forest and cultivation of the soil ; a greater amount of the

earth's surface being exposed to the action of the sun's rays, but in subsequent years when it has been deprived of its superabundant vegetable matter and well drained, its inhabitants are exempted in a great measure from malarious diseases. The pine lands which are dry and removed from the water courses, are always considered healthy; one of the malarial elements, moisture, being absent; a fact also strikingly illustrated in the epidemics which annually devastate Egypt, caused by the overflowing of the Nile,—the disease never extending into the arid plains of the desert. An excess of moisture tends to the destruction of any poison which may have been in existence prior to its creation, for instance flat places in ordinary seasons unhealthy, become healthy if completely overflowed, while, on the contrary, high lands where sickness was never known to prevail before, emit a miasm which sweeps every thing before it. The advice of Lancisi to those traveling near the Pontine marshes, not to do so after dusk or early in the morning, as the dew in their neighbourhood is largely adulterated with miasm in a concentrated state, might well be given to travelers in Florida, where the dews are remarkably heavy, and, from the great susceptibility of the system in warm climates to the impression of morbid agents, capable of doing much injury at that time.

Dirt Eating.—Apart from the sickening influence of malaria, we cannot refrain from noticing the degeneration, mental and physical, of children reared in this extreme southern portion of the union. During our first months' residence in Florida, in passing through the country, we often stopped boys on the road, not over ten or twelve years of age, who presented the most abject state of degeneration imaginable; with head and body large, limbs shriveled and deformed, eyes dull and of a bilious tinge, lips colourless, and features distorted. This degeneration, by many, has been attributed to dirt-eating, a propensity very general throughout the whole country.

Having completed a general and consequently incomplete description of the physical phenomena of a portion of the territory, reference will now be made to its diseases. If the remark made by Dr. Macculloch be true, that the disorders produced by malaria include more than half the number, prevailing at any moment throughout the universe, it may readily be inferred from what has been said above, that a majority of our diseases are *malarial*.

Intermittent Fever.—There is no disease with which physicians are supposed to be better acquainted than intermittent fever—but on the other hand it must at the same time be confessed, there are few which occur under so many different circumstances—modified by so many causes, both malarial and geological, and so difficult to be recognized in its anomalous forms. But few cases of an inflammatory character are met with—they are usually adynamic and complicated with visceral obstructions, and if suffered to go on, degenerate into remittent or congestive fever, or assume

the appearance of slight apoplectic or epileptic attacks; palpitation of the heart, toothache, "sun pain," &c.—diseases Dr. Macculloch would have us believe identical with intermittent fevers, because of their liability to slight remissions—their alternating not unfrequently with it, and their being cured by the same remedies. Enlargement of the spleen and night sweats are the most troublesome sequelæ of intermittent fever. When the disease becomes chronic, the intellect is impaired—which, together with the physical degeneration, renders life a burden. Relapses are frequent, and each succeeding attack increases the susceptibility of the patient to another.

Remittent Fever.—Intimately related to intermittent fever, and produced by the same cause is bilious remittent fever, the prevailing febrile disease of our summer months. So much do the two diseases resemble each other, as to be considered by many as identical, or at any rate modifications of the same disease, an opinion not destitute of foundation, as their symptoms during life, and morbid appearances after death, differ only in degree.

The disease is usually ushered in by a chill, sometimes severe, frequently nothing more than a cold sensation, (which occurs as a general rule every twenty-four or forty-eight hours) followed by pain in the back and limbs. The tongue in the early stages of remittent fever is moist, and presents a white or yellow appearance, but as the disease advances, it becomes dry and the colour changes to a dark brown. Pain in the head is a common symptom, frequently continuing through the whole progress of the case. During the stage of excitement, the pulse is increased both in force and frequency, while, during the remission, it is scarcely above the natural standard, frequently below it. The bowels are commonly torpid, requiring the most active cathartics to excite them. After the disease has continued for four or five days, epigastric tenderness is not uncommon, attended by weight or tension, requiring for its relief the abstraction of blood locally, blisters, &c.

The condition of the skin varies during the stage of excitement; its temperature is much increased, while it is not unfrequently lessened during the remission. In grave cases its colour is inclined to be yellow; in slight and even in tolerably severe cases, its appearance is not materially changed.

The intelligence of the patient being influenced by the violence of the headache, it may be readily inferred that in the beginning of both *recovered* and *fatal* cases where there is much pain in the head, delirium is not an uncommon symptom during the exacerbation. In fatal cases towards their termination, there is generally low muttering delirium or coma.

Remittent fever in this climate, as a general rule, terminates in from three to ten days.

Congestive Fever.—Of all the diseases incident to a southern climate, no one, perhaps, is so much dreaded by the profession, as congestive fever, a disease which, unless arrested in the onset, is generally attended by the

worst consequences. Its attack is preceded by precursory symptoms, sudden and violent, and, unless the most prompt measures are early used, it runs its course in from twenty-four to seventy-two hours. For several days prior to an attack, the subject of it complains of general malaise with derangement of the chylopoietic viscera; finally a chill supervenes which ushers in the disease in all its violence. The pulse is now exceedingly feeble; breathing quick and laborious; the tongue moist; bowels usually costive; they are, however, sometimes fully acted upon, and not unfrequently there is nausea and vomiting. The patient complains of *internal heat* and of a heavy load pressing on the epigastric region; his calls for water and efforts to throw off the load pressing him are frequent. As the disease progresses the extremities become very cold and shriveled; pulse almost imperceptible; intellect clouded; spittle spontaneously flows from the mouth; subsultus supervenes; the skin grows colder, is covered with a cold clammy perspiration, and loses its natural colour, particularly that of the face, and finally it is not uncommon for the case to terminate in convulsions, especially if there be congestion of the spinal cord. Such are the symptoms most usually observed. We have not attempted a full description of them, as they are modified by a variety of circumstances—such as seat of congestion, &c.

During the summer and fall seasons, cholera infantum, diarrhoea and dysentery are very prevalent, as might be inferred from the temperature of the weather and locality of the country, being produced by nearly the same causes that give rise to intermittent and bilious fevers. To a variety of other causes have they been attributed, as, for instance—to eating fruit, to heat, &c. Facts, however, seem not to favour the supposition. That fruits in moderation are prejudicial to health or productive of disease, we cannot believe, as, during seasons of great scarcity these diseases are not uncommon, while it is not ascertained that they occur more frequently during seasons of plenty than at any other time. A rigid proscription of them will not prevent an attack of cholera infantum or diarrhoea, nor will a free use of them bring on disease without the influence of other agents, as is witnessed in families where no restraint is imposed on the children in eating apples, melons, currants, and other fruits, even before they are matured. That heat alone is incapable of giving rise to the above diseases we are assured from the circumstance of this not being most prevalent during the warmest summers. Hence, we must conclude that other causes than warm weather and the use of fruits are necessary to their production. From the prevalence of febrile diseases and of bowel complaints and disappearance at about the same time, it is altogether probable that they are engendered by one common cause.

Diarrhoea and dysentery are not usually found uncomplicated with other disease. They are, for the most part, sequelæ of obstinate or badly treated cases of fever, and require for their removal a long course of treatment.

In the tropical climate of the southern states the liver is most generally

the suffering organ in disease, as the respiratory apparatus is at the north; as a consequence, the affections to which it is prone are numerous—often slow in their attack and progress, and liable to be misunderstood from their obscurity. The organization of the liver, its immense size in comparison with the other abdominal organs, and the important office that it is called on to perform, force the belief upon us that any derangement either in structure or function must be attended with consequences which will sooner or later, if not relieved, undermine the health, cause the patient to drag out a miserable existence, and finally end his career, a victim to delay and inefficient or misapplied medical treatment.

As acute hepatitis is uncommon in this climate, except as a result of the chronic form, a consideration of it will not be had, our object being to speak more particularly of the latter, as it is a disease daily encountered by the southern practitioner. In saying that acute hepatitis seldom occurs except as a sequel of the chronic form, we wish it to be understood that the disease is scarcely ever a primary affection itself, and that it usually supervenes upon or is rather an aggravation of the last named variety. For years patients will labour under a variety of symptoms, without being able to determine or even suspect their cause, when suddenly they are aggravated, or a new one in the catalogue appears, and its true nature revealed. Such is its insidious Protean character.

Middle Florida has been visited by scarlatina very rarely. Sporadic cases are occasionally seen, mild, however, in character. About the first of January last, it made its appearance in the village of Quincy, extending its ravages to some two or three plantations in its immediate vicinity. It was confined to a few families, several members in each being attacked, varying in age from one to ten years. The two first cases that happened were marked by a peculiar malignancy and terminated, we believe, within thirty-six or forty-eight hours from the commencement of the attack. They were for a time supposed not to be cases of scarlet fever, but subsequent cases, similar in many respects, revealed to the attending physician the true nature of the disease, which, in the course of the epidemic, assumed all appearances from the mildest to the most malignant. The patients were, as a general rule attacked suddenly, either with pain in the head or vomiting. No two cases presented exactly the same appearance. In all severe cases the heat of skin was great from the commencement to the termination of the disease. The pulse was frequent in some cases, whilst in others it was slow, respiration difficult, and the thirst tormenting. In a majority of cases there was no affection of the throat complained of, while in others there was soreness of the fauces and neighbouring parts for a month after the fever had subsided. In two or three instances the glands of the throat swelled and suppurated, giving rise to troublesome sores. The absence of, and the singularity of the eruption when present, gave rise to a doubt among some, whether the disease was scarlatina or not. Its absence

was no just ground for doubt, as it often appears without the eruption being present, constituting the *scarlatina sine eruptione* of some writers, and the *scarlatina sine exanthemata* of others. The eruption, when it manifested itself, appeared simultaneously with the other symptoms, and presented a variety of appearances—in some, it was papular, and in others miliary. The eruption coalesced in a very short time, became pretty uniform over the whole body, and faded or assumed a livid appearance in the fatal cases prior to death. Vomiting and purging in the commencement of the disease were always grave symptoms, and, if we remember correctly, both of the fatal cases which we witnessed had liquid operations for a few hours before their termination. The determination to the brain in many cases was excessive; when this happened, unless a decisive plan of treatment was resorted to, convulsions would ensue, and the patient die comatose. This was the case with a fine little boy of this place, a son of Judge Allison. In the morning he was restless, and seemed to have contracted a slight cold; no attention was paid to him, save the administration of a mild aperient; towards evening, while resting on his nurse's knee, convulsions came on, and, notwithstanding an active course of treatment, he died comatose on the third day of his illness. Two or three cases were reduced very low by the supervention of enteric symptoms, which were difficult to relieve.

As before remarked, the disease was confined to a few families, and these were either in the same quarter of the village or related to each other, and in the habit of constant association. Its increase was gradual. When it commenced it usually attacked all the younger members of a family in succession. Several had the disease who held no communication with the sick or convalescent, while many escaped who were often in the sick room. As to its contagiousness or non contagiousness we are not prepared to offer an opinion.

Nearly all the recovered cases were afflicted with some one of the sequelæ of scarlet fever. The lips, mouth and cheeks in several were ulcerated, whilst others had partial or general dropsy, which was relieved by cathartics succeeded by tonics. Slight exposure to cold, or irregularity in diet, would bring on a relapse with its attendant consequences.

Belladonna as a prophylactic, was extensively used, but so far as we know, without any good results, as a number to whom the belladonna was administered had the disease in all its violence. From the trial made, we are inclined to adopt the opinions of Pereira, who says that whilst the facts brought forward in favour of the existence of this prophylactic power are only negative, those which can be adduced against it are positive, for twenty cases of failure are more conclusive against it than one thousand of non occurrence are in favour of it.

ART. VIII.—*Fibrous Tumour of the Uterus.* By A. D. CHALONER, M. A.,
M. D., of Philadelphia. With two Wood Cuts.

FEBRUARY 2d, 1843, I was called to see Mary Ann Miller, ætat. 39, (coloured,) and found her suffering with a severe attack of pleuritis, of the right side, from which she recovered under active treatment. Shortly after, she was seized with a violent cough and all the symptoms of phthisis. At this time she informed me of the existence of a uterine tumour, and that a physician who had previously attended her had made an examination, and pronounced her complaint to be “a *cancerous affection of the womb*, and that *no relief could be afforded.*” She refused to follow any treatment for the pectoral symptoms, and would not permit any examination of the uterine tumour.

In May, 1843, I was again called to see her, and found her dying, and on the 9th of May, I made an autopsy, assisted by Drs. N. D. Benedict and L. W. Buffington, of Philadelphia.

Autopsy.—General appearance of the body:—Great emaciation; on percussion, little or no dullness over the left lung; over the right lung dullness.

Head was not examined.

Thorax.—Adhesions of the entire pleura on the right side; the superior half of the left lobe of the left lung tuberculous and softened, with a few distinct cavities, and but a small portion of the lung containing air. The whole of the upper lobe of the right lung tuberculous, and one cavity containing about half an ounce of fluid.

Heart, dark-coloured, of natural size, and filled with coagula.

Liver, healthy.

Stomach and intestinal canal, healthy.

Spleen, small and softened.

Uterus, greatly enlarged and forced towards the left side and low down in the cavity of the pelvis, by a large globular body or tumour developed in its walls, exterior to the cavity of the uterus, and extending from the neck of the uterus to the Fallopian tube, on the right side, about *four inches in length* and from *two and a half to three inches in breadth*. The exterior surface of this tumour was of a reddish-brown colour, and there were two small lobulated tumours about one inch in diameter; one on the anterior, and the other on the posterior surface of the fundus of the uterus, (vide fig. 1, a.) The cavity of the uterus was healthy, and the arborescent appearance of the neck was finely shown, (fig. 2, b and c;) and the large tumour, when laid open, was lobulated, and traversed by strong fibrous bands, having a marbled appearance. The whole of the

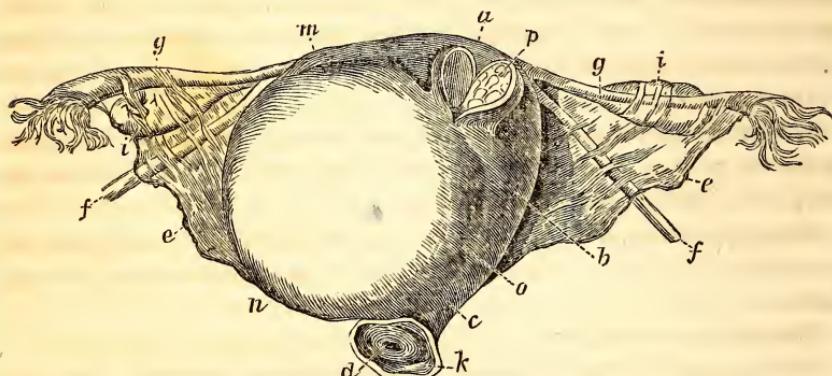
tumour being in the proper tissue of the uterus, exterior to its cavity, its weight was about *six and a half ounces*.

The ovaries were healthy.

The patient suffered little or no uneasiness from the tumour, which had been six years in formation. She had one child. During the existence of the tumour no discharge had ever proceeded from it.

A reference to the accompanying drawings, accurately taken from nature and beautifully coloured by Mr. W. Earle Smith, of Philadelphia, will give a better impression than a written description.

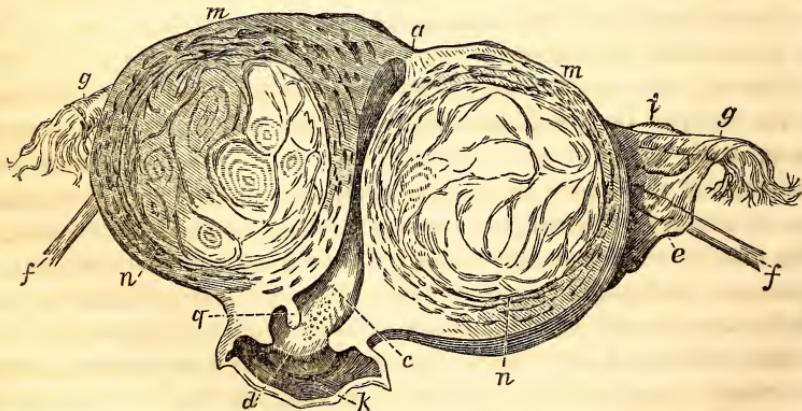
Fig. 1.



- a. Fundus.
- b. The body of the uterus.
- c. The neck.
- d. Os uteri.
- e. The broad ligaments.
- f. The round ligaments.

- g. The Fallopian tubes.
- i. Ovaries.
- k. Fragment of the vagina.
- m, n, o. The principal tumour.
- p. The small tumour over the fundus uteri.

Fig. 2.



- a. The fundus.
- c. The neck.
- d. Os uteri.
- e. The broad ligaments.
- f. The round ligaments.

- g. The Fallopian tubes.
- i. The ovaries.
- k. Fragment of the vagina.
- m, n. The principal tumour.
- q. Small pedunculated tumour.

ART. IX.—*Case of Pericarditis.* By CHARLES C. HILDRETH, M. D.

Geo. Powell, blacksmith, æt. 35, of strong constitution, and temperate habits, has for some years past been subject to hemorrhages from the nose, and occasionally to some disturbance of the heart's action.

For six months past he has had no hemorrhage; but frequently after violent exercise has been troubled with palpitations and a feeling of oppression about the chest.

On Aug. 15th, 1843, after exercise of unusual violence, and from sudden suppression of perspiration, he was attacked with violent palpitation and great praecordial distress—being unable to work, he went home, and without medical advice took an emetic of antimony.

On the 17th, he came to my office to consult me. In making an examination of his case I found but little febrile excitement, great oppression about the chest, but no cough. Impulse of the heart increased, with great irregularity in the contraction of the ventricles; pulse small, tense, intermitting, sometimes so rapid as scarcely to be counted. With the hope of arresting the incipient inflammation I bled him to approaching syncope. About ten ounces only were lost. He continued faint for half an hour, and in the mean time threw up the contents of the stomach. From the loss of blood and emesis he found considerable relief from oppression about the chest. Prescribed ten grs. of calomel and eight of Dover's powder at night, to be followed by a saline purgative in the morning.

Aug. 18th. The dyspnœa, praecordial distress and palpitation continued—has been freely purged—secretions natural from the bowels, but from the kidneys very high-coloured, frequently passed, and in small quantities. Patient cannot lie on the left side nor horizontally. Sits well, propped up in bed. In making a more minute examination of the heart, I found that no perceptible extension of the natural, dull or flat sound over it could be detected by percussion. By auscultation, found the impulse of the heart rather stronger than natural, its valvular sounds, however, not heard over an unusual extent.

Contraction of the ventricles, irregular, intermittent, sometimes extremely rapid; pulse at the wrist not always corresponding with each contraction—a distinct rubbing or friction sound (*bruit de frottement*) was found to accompany the action of the heart, indicating some obstruction to its natural freedom of motion. Pressure upwards upon the diaphragm and over the region of the heart gave pain. Having satisfactorily to myself made the diagnosis of pericarditis, I proceeded to treat the case as follows:—To allay the irregularity as well as the frequency of the heart's action, 20 drops of tinct. digitalis were given three times daily, in the infusion of cimicifuga. As the constitutional influence of mercury in inflammations of serous

membranes has an almost invariably happy effect; an attempt was made to bring the patient under its action as soon as possible. To this end, 5 grs. of calomel were given every four hours, continued with Dover's powder sufficient to prevent its passing off too readily by the bowels.

In the evening, during an exacerbation of fever, he was again bled to approaching syncope; but without much benefit, or relief from oppression.

Aug. 19th. Symptoms much the same; passed a very restless night; considerable fever; action of the heart not influenced by remedies; secretion from the kidneys very high-coloured, and passed in small quantities; pulse very irregular; oppression in breathing, and pains about the region of the heart persist. The friction or rubbing sound accompanying the contraction of the ventricles has disappeared entirely. Slight cough of a dry character. Bled again to approaching syncope, and gave one-fourth gr. morphia with calomel five grs., to induce repose at night. Continue treatment.

Aug. 20th. Patient worse; vomiting incessantly, discharging large quantities of gas from the stomach; very much annoyed by hiccup; considerable swelling of face and abdomen, of hands and feet; action of the heart very irregular, intermittent, rapid; many of the contractions of the ventricles not perceptible at the wrist.

Impulse of the heart diminished, and sounds less distinct.

Percussion indicates an extension of the flat sound over an unusual extent in the praecordial region.

The left side of the chest evidently enlarged; the intercostal spaces unusually prominent; on actual measurement a difference of an inch and a half found in favour of the left side.

Patient again bled to approaching syncope, with considerable relief to the respiration; a large blister applied over the region of the heart and dressed with mercurial ointment. Syrup of ginger with fractional doses of morphia now given with good effect in allaying the hiccup, and the secretion of gas by the stomach. The digitalis and mercury continued.

Aug. 21st. Patient somewhat relieved; some evidence of the constitutional influence of the mercury—action of the heart very nearly the same; slight cough of a dry character; respiratory murmur perfect in all parts of the chest, proving the cough to be merely sympathetic. Continue treatment. Digitalis and mercury as usual.

Aug. 22d. Patient better in all respects; gums swollen; saliva more abundant; cough diminished; action of the heart more regular; pulse slower; but intermittent,—not so much oppression about the praecordial region; can lie down somewhat nearer the horizontal posture, very free secretion of urine during the night, nearly natural in colour.

Effusion into the cellular structures of the face, and extremities very nearly reabsorbed.

Omit the mercury, but continue the digitalis in doses of twenty drops three times daily, with the cimicifuga.

From this time forth the patient continued gradually to improve—a gentle mercurial action was maintained for about ten days. The digitalis was given regularly up to Sept. 4th, when it was omitted.

The pulse gradually came down to the healthy standard under the influence of the remedies; and on Sept. 1st the patient had so far recovered as to visit my office. Abstinence from all active exertion was hence enjoined for some weeks to come, in order to guard against any return of the symptoms.

Remarks.—That this was a case of pure pericarditis, we think, cannot well be doubted. The early history of the case would favour this opinion, as well as the presence of all the ordinary symptoms of the disease, viz.: the pain and oppression about the region of the heart; the palpitations, irregularity, and intermission of its action, dropsical symptoms, &c.

The friction sounds heard on the 18th indicated a slight effusion of lymph or serum into the free surface of the pericardium, thus impairing its freedom of motion, and by actual contact and friction between its opposing surfaces, giving rise to the sounds referred to, during the contractions of the ventricles.

The entire absence of these sounds on the 19th indicated (in connection with the other symptoms), so great an effusion into the pericardium as to force its opposing surfaces from contact, and, of course, to destroy the sounds from friction. Diminished impulse and recession of the valvular sounds and other evidence of increased effusion.

The distension of the left intercostal spaces, the signs from percussion, the enlargement of the left side of the chest as proved by actual measurement on the 20th, establish beyond a doubt the presence of a large effusion into the pericardium. That the effusion was not into the pleura, we infer from its *location* as defined by percussion, from the absence of the ordinary signs of pleurisy, and from the great disturbance of the heart's action, the anasarca, &c., which do not ordinarily attend pleurisy.

The hiccough, on the 20th indicated an extension of the inflammation to the serous covering of the diaphragm; and the vomiting and free secretion of gas by the stomach, were evidences of the strong sympathy between the stomach and diaphragm, which, it will be remembered, are in actual contact.

The cough was also sympathetic; as proven by the perfectly healthy character of the respiration.

The anasarca of the extremities and face, was the result (as in almost every other instance) of pressure upon the large venous cavities or trunks; thus obstructing the free return of blood to the heart. The presence of fluid in the pericardium, by interfering with the free dilatation of the auri-

cles and ventricles, no doubt contributed in inducing this exudation of serum from the extremities of the veins.

In referring to the treatment of this case, we cannot fail to remark the small amount of influence exerted over the disease by the most active remedies. Repeated bleeding, blistering, purgatives, digitalis, &c., appeared to exert but a very slight salutary agency. Nor did the disease begin to subside, until the mercurial influence was fairly established. It then gave way promptly and decidedly. The absorbent system being aroused into action, rapidly took up the serum effused into the pericardium and cellular structures, and the kidneys under the influence of the digitalis promptly expelled it from the system. The patient was now decidedly convalescent, the inflammation and its consequences were quickly removed; exhibiting another instance of the energetic action of mercury on the diseases of serous membranes.

ART. X.—*A notice of the Epidemic Sore Throat as it appeared in Salem, N. J., and its vicinity.* By J. GIBBON, M. D.

SOME sporadic cases of the disease which forms the subject of this notice were observed during the latter part of the summer of 1844. It did not appear prominently as an epidemic, however, until late in November, from which period until the close of the winter it prevailed extensively in this neighbourhood. It resembled, in its general character and symptoms, the affection described by Bretonneau under the name of diphtherite (the cynanche maligna of another nomenclature).

It generally commenced with a slight soreness of the throat, accompanied by more or less cough, redness and swelling of the tonsils, uvula, velum palati and neighbouring parts. As the disease advanced the pain and difficulty in swallowing became more manifest, and the tonsils more enlarged. Hoarseness soon followed, and this symptom, where the disease was permitted to pursue its course unchecked, was rapidly succeeded by the stridulous sounds of croup. The disease having, at this stage of its progress, reached the larynx and trachea, displayed all the symptoms of croup superadded to those of ordinary catarrh. Upon examining the throat externally the tonsils could be distinctly felt enlarged and indurated, though but slightly painful to the touch.

Excepting in a few cases, the constitutional symptoms were not severe during the first stage. Some few cases were, however, accompanied by high febrile excitement and symptoms of acute inflammatory action from the beginning. As a general rule, the system sympathized but little with the diseased organs prior to the formation of an artificial membrane upon

their surface. This occurred at various periods, from a few hours to ten days or two weeks from the commencement of the disease. The breathing now became laborious; signs of cerebral engorgement began to show themselves; and the symptoms resembled most accurately those of the second stage of croup. A false membrane blocking up the larynx, trachea and bronchi, and preventing the access of air and the oxygenation of the blood, was the cause of death in the fatal cases. In a few instances this membrane extended to the fauces. In the only post-mortem examination which the writer witnessed, made by his friend Dr. Thompson, the larynx, trachea and larger bronchi were coated with this false structure to such an extent as to preclude the possibility of respiration. As in croup, this membrane was frequently discharged in large quantities under the operation of an emetic. In one instance a portion of this membrane, partly dislodged from its original seat, was seen by the writer protruding like a tube to the extent of half an inch above the glottis, the immediate removal of which only prevented the child from suffocation.

The disease was most fatal among infants. Children above the age of two years generally recovered under timely and proper treatment. The recovery was, however, tedious—the redness and swelling of the tonsils remaining, in most cases, for two or three weeks after the violence of the disease had subsided. In many cases the enlargement of the tonsils still remained after the lapse of a month or six weeks. Not unfrequently the disease, after having almost subsided, would be aggravated by changes in the weather. An unusually damp atmosphere almost invariably aggravated the symptoms; while a few days of clear dry weather almost as invariably diminished the violence. Cases were observed to multiply rapidly after a few days of wet and rainy weather.

It was believed by some to be contagious; but its progress appeared more like that of an epidemic than a contagious disease. Scarcely a child in the neighbourhood escaped an attack at some period of its prevalence. The fact, too, of its prevailing in various parts of the country simultaneously with its appearance among us argues strongly against the probability of its having been contagious. Its origin may, with much greater probability, be traced to the agency of some peculiar influence generated by the open weather, and the constant succession of rains which characterized the past autumn and winter.

The disease, in the form above described, was confined exclusively to children. A modification of it, however, under the various forms of tracheitis, bronchitis, cynanche tonsillaris, &c. &c., was very prevalent among adults during the winter. These, as a general rule, were characterized by a minor degree of inflammatory action than is usually to be observed in their progress. They were also more tedious in their progress—partaking, in many instances, of the exacerbations and remissions which marked the course of the epidemic among children.

The treatment most successfully resorted to consisted of emetics frequently repeated, accompanied by external irritating applications. These were almost invariably successful when early and perseveringly used. As an external application, flying blisters of cantharides seemed the most efficient. In very young infants, and in older children where they were not resorted to at an early period of the disease, they frequently failed to relieve.

In these cases calomel and antimony were the most to be relied on. Bleeding, though in some cases it proved useful, was, as a general rule, of little benefit. Internal applications were also of little use. A great variety were resorted to by the writer. Weak infusions of cayenne, the capsicum gargle, the sulphate of copper, chloride of soda, diluted muriatic and sulphuric acids, alum, borax, &c. &c., were used with apparently the same results. If any one article was entitled to more confidence than another, it was a strong solution of nitrate of silver. After free puking, this seemed, in some cases, to mitigate the local symptoms. As applications to the enlarged tonsils which so frequently followed the disease, the solid caustic and the tincture of iodine seemed the most beneficial. There were many instances, however, where these enlargements continued for six weeks or two months after the violence of the disease had spent itself. The epidemic seemed to diminish in violence as the spring approached, and finally disappeared with the rainy weather of the season. There are, at present, no cases, so far as my knowledge extends, in this neighbourhood.

SALEM, May 10th, 1845.

REVIEWS.

ART. XI.—*Essays on Pathology and Therapeutics, being the substance of the course of lectures delivered by SAMUEL HENRY DICKSON, M. D., Professor of the Institutes and Practice of Medicine in the Medical College of the State of South Carolina; 2 vols. 8vo, pp. 588–651. Charles-ton, 1845.*

MODEST as is the title prefixed to the work of Professor Dickson, and notwithstanding he disclaims any desire that the profession should receive it as a complete and systematic treatise on the practice of medicine, its pages will nevertheless, be found to comprise a very interesting exposition of the pathology and treatment of the more important of those diseases which commonly prevail in the Middle, Southern, and Western States of our Union.

Although we differ from the author materially, in regard to many of his pathological views, and question, also, the correctness of a few of his therapeutic directions, we must, at the same time, concede to him the credit of having produced a work replete with valuable hints in respect to the character, causes, phenomena, and treatment of the several forms of disease the American physician is the most frequently called upon to treat, and in relation to which the accounts presented by European writers will seldom be found sufficiently full and accurate.

The work of Professor Dickson is not made up of a mere abstract of the facts and opinions of others; it may claim, in some degree, the character of an original treatise upon the subjects which it comprises. The author, while he has made free use of the materials furnished by his cotemporaries and predecessors, has so successfully combined these with the results of his own observations and experience—testing by the latter their true value and practical application—that the work is to be received less as a mere summary of the present state of medical opinion and practice, than as an exposition of the views and deductions derived from the author's own clinical observations, and in this light is to be viewed as an actual addition to the amount of our medical knowledge.

The first ten chapters of the work are devoted to a consideration of some of the leading points of general pathology, under the heads of causes, seats, tendency, and phenomena of disease. Marked, as these chapters unquestionably are, with much good sense and justness of observation, and presenting, as they do, a very fair outline of the subjects of which they treat, they constitute, nevertheless, a portion of the work which will be found more frequently, perhaps, than any of the others amenable to criticism. Upon many of the questions discussed much difference of opinion has heretofore existed, and still continues to exist, among pathologists; and in relation to not a few it will probably be long before we shall arrive, if we ever do, at any thing approaching to clear and positive conclusions. Even with this admission we believe that the deductions of the author are not always those to which the facts in our possession most obviously lead, but are occasionally opposed to the weight of positive testimony. His reasoning is not always as clear and conclusive as could be desired; and while he has

presented, in their full force, all those facts which appear to favour his own views, he has not in every instance, we conceive, done equal justice to the facts of an opposite character.

These remarks will apply more particularly to the chapters which treat of the exciting causes of diseases, especially malaria and contagion, and of the causes and history of endemics and epidemics.

The term malaria Professor Dickson, and we think from sufficient reasons, prefers to the more common term miasm or miasma. Although the accuracy of the concise account which he has given of the particular circumstances under which the vitiation of the air, implied by this term, most commonly takes place, cannot be disputed, there is but little force in the chain of reasoning by which he has attempted to sustain the popular doctrine, that the vitiation is caused by the admixture with the atmosphere of a poison, resulting from vegetable or animal decomposition.

Of the existence of this poison he admits that we have no other evidence than that derivable from "its morbid influences upon the living body." The chemist has examined, with the minutest care, the constituents of the morbid atmospheres in which it has been supposed to abound, but without being able, as yet, to discover by any test its existence.

"The known products of vegetable decay have been again and again experimented with, but to no purpose. Neither by eudiometrical applications, nor by the most perfect analysis, can any additional ingredient of a gaseous nature, either in a state of mere mixture or chemical combination, be detected in such air; and we therefore infer, that it is not carbonic acid, nor carburetted hydrogen, nor any other of the chemical compounds that conjecture has suggested."

So far extends the candid admission of our author—who still looks, however, to the aid of chemistry for the ultimate discovery of the supposed poison.

Had we sufficient space, or rather would a subject that has been so frequently and fully discussed, warrant our extending sufficiently the limits of this article, it could be readily proved, that precisely the same form of fevers prevail as often in situations in which neither vegetable or animal decomposition can be going on to a sufficient extent materially to contaminate the surrounding atmosphere, as they do in the neighbourhood of marshes or of shallow ponds of stagnant water. The notion that the poison generated in these latter situations is conveyed by the winds to a distance, as asserted by some, of many miles, it is unnecessary to examine until the actual existence of such poison is demonstrated.

The general facts in relation to the particular circumstances under which what have with propriety been termed malarious diseases are most liable to occur, and the means calculated to guard against their attack are very fairly and accurately sketched by Professor Dickson, notwithstanding he has attempted to enlist, often by a very compulsory process, all of them in the defence of his favourite position, of a specific poison the product of vegetable decomposition.

A concise but very sensible account is given of the contamination of the atmosphere by the products of animal putrefaction, and its agency in the production of disease—we cannot, however, believe with the author, that the atmospheric contamination here alluded to, is produced by any "deleterious substances produced or eliminated besides the gases which we can collect during the process."

Upon the obscure and much contested subject of contagion, as a cause of disease, the views of our author are neither very precise nor novel. Contagion he defines to be—

"A peculiar modification of matter given out by a *diseased* body, which possesses the characteristic power of generating, in a healthy body, when brought to act upon it, a condition of disease similar to that which produced it."

"The modes of action in which contagions exhibit their power are various:

"1. Some require a wound, into which matter, in a palpable form, is to be inserted by inoculation, or by application, where the cutaneous protective tegument has been abraded, as vaccine, herpes, tinea capitis, and perhaps measles.

"2. Some affect the sound skin, but demand circumstances favourable to a protracted application, as psora, syphilis, gonorrhœa.

"These assume the palpable condition,—the impalpable contagions exert a more extended and dreadful potency.

"3. The next class requires, generally speaking, confinement within a limited amount of air for a notable space of time, which air we suppose to be impregnated with the matter of specified contagion. Of this sort are typhus, hospital gangrene, erysipelas. This condition of confinement in vitiated air is favourable, doubtless, to all the forms of impalpable contagion, but is not necessary in more than a very few."

After noticing, in the 4th and 5th place, the distance at which contagions are capable of exerting, in the majority of instances, a morbid influence, and the agency of fomites in their preservation and extension, Professor Dickson remarks, 6thly,

"The most important, however, and injurious of all the modes of action of contagion, is its epidemic diffusion in the atmosphere. This diffusion may be to a greater or less extent, or exhibit a greater or less intensity, according to circumstances."

To a contagious matter widely diffused in the atmosphere the author would appear, indeed, to refer all epidemic diseases.

This theory of contagion is certainly a very comprehensive one; if it be correct, it will require that we should include in the list of contagious diseases not only those which are communicable by contact alone with the sick or by inoculation, but, also, those which are endemic in localities where the atmosphere is, from any cause, rendered stagnant and impure, as well as all those which are liable to prevail epidemically.

Professor Dickson appears to be perfectly aware of the objections to which his theory of contagion, particularly so far as it regards the supposition of its being the sole cause of epidemics is liable, and he has attempted to obviate the more prominent of these by a chain of reasoning, which is, however, any thing but satisfactory or conclusive. He admits the spontaneous origin of all the contagious diseases, even small-pox; but does not perceive that there is no more difficulty in accounting for the same mode of origin of an affection simultaneously in ten individuals than in one. From all that we know of those diseases which are unquestionably contagious, in the proper sense of the term, it would appear that the distance to which their infecting influence is limited, in a pure and unconfined atmosphere is extremely circumscribed; now it may be asked, what are the peculiar circumstances under which this influence becomes occasionally extended throughout the atmosphere of a wide extent of country, and, within a short period, enable it to pass beyond wide seas, and over high and extended mountainous chains, carrying disease and death to distant countries; traveling, in fact, as in the case of some of the epidemics of catarrh and the cholera, throughout the entire circumference of the globe?

But, as the author very candidly admits,—

"We know nothing of the conditions which sometimes limit scarlatina, measles, and small-pox, to the production of a few sporadic cases, easily traceable in most of the steps of their progress, and of the contrasted contingencies

which, at other seasons, give them wings as it were, and scatter broadcast the seeds of pestilence. But surely," he remarks, "it will not be required of me to produce proofs of the fact familiar to every physician, that such differences do occur, in the promptness, facility, and extent of the spread of contagious diseases, at different times. All the febrile *contagions*, except vaccine, are capable of being thus propagated,—hence they may be styled diffusive or epidemic."

But the question is not as to the liability of certain contagious diseases to prevail epidemically, but whether their extension, in the latter case, is the result of a specific contagion, produced by a peculiar morbid action of the animal organism, diffused in the atmosphere of the city or district of country in which the diseases alluded to suddenly appear and prevail, and by the spread of which, from atmosphere to atmosphere, these diseases are extended to neighbouring and remote situations.

Professor Dickson remarks, that with the exception of the influenza alone, and but partially even of this,—

"All epidemic and diffuse contagions have a limit in their association with cities, and other localities in which density of population, whether permanent or transitory, is met with. From city to city they spread by slow transmission and casual opportunity, being propagated from neighbourhood to neighbourhood, or traveling on the great channels of human intercourse—a road or navigable river, either with the bodies of the sick, or in fomites of diversified character, or by means of portions of what is called 'infected atmosphere.' This third mode of propagation is much dwelt upon by those who are unwilling to admit the contagiousness of particular forms of disease, and who prefer to ascribe such diseases to unknown and unimagined modes of contamination of atmosphere, rather than acknowledge the possibility of saturating any given body of air with contagious matter evolved from a *diseased subject*, as we find it often filled with the soft and fragrant exhalations from odorous substances, or the foul and mephitic products of decay and miasmatic fermentation."

Without stopping to show how little testimony there is to sustain the author's views of the manner in which diseases become epidemic, and the vast body of facts which stand in direct opposition to them, we shall merely remark, that it is far more consistent with sound philosophy to admit our entire ignorance of the cause of epidemics or even to refer them to some unknown and as yet unappreciable "morbid constitution of the atmosphere," than to adopt, with Professor Dickson, a theory which, instead of shedding light upon that wide and rapid spread of diseases which occasionally occurs, involves the whole subject in even greater obscurity.

The author very properly defines an *endemic* as a malady, "which occurring with special frequency in any one locality in a permanent way, proves the existence in that locality of an agency of a peculiar nature, whether known or unknown, efficient in its production." It is in this sense alone that the term should be invariably applied.

"Local epidemics have been often confounded with endemics, but are readily distinguished by reference to the permanency of the cause which gives rise to them, whatever it may be. Thus, yellow fever, which at a certain season of the year, is always ready to be generated in a fit subject at Havana and Vera Cruz, is occasionally, though rarely, *epidemic* at New York, Boston (?) or Philadelphia—in which places, when it occurs, it is singularly local, and confined to very narrow spots or infected districts! Typhus fever, pneumonia typhoides, dysentery may prevail at distant intervals in any community; and even diseases whose contagious power is undenied, as small pox, measles, scarlet fever, &c., sometimes spread so very generally through a dense population, as to have been regarded in the light of local epidemics."

That they do occur, especially the two latter, in a strictly epidemic form,

without the possibility of tracing the great majority of the cases to one focus or even several foci of contagion, there can be no doubt.

Local epidemics the professor admits to be almost always attributable to some obvious cause, whose influence is limited to the situations in which they appear, and may be detected and pointed out upon a careful examination of all the concurring circumstances, such as the temperature of the season, the previous and present state of the weather as to dryness or moisture, the stagnation of the air from unfrequency of winds or tempests, the prevalence of particular winds of known or special quality, the deficiency, perhaps, and perhaps the superabundance of the electric fluid, the decomposition of vegetable substances by which a subtle and malignant effluvium is produced, recognized as marsh miasma or malaria, and lastly, animal putrefaction.

This removes, at any rate, the diseases when they occur as local epidemics from the category of those dependent upon a specific contagion disseminated in the atmosphere, inasmuch as this, according to our author, "has but one origin,—being the product of specific morbid action in contagious diseases."

General, that is wide spread, epidemics, we are told, "cannot be dependent for their origin upon the local influences just enumerated," inasmuch as "they prevail under every possible diversity of circumstance and situation, not only independently of, but actually bidding defiance to all known contingencies."

This very positive declaration of our author, he would find it very difficult, we apprehend, to sustain by a reference to any well established chain of evidence deduced from the accurate history of either of the more widely extended epidemics, especially such as have been closely observed in modern times.

Notwithstanding many of the views set forth by Professor Dickson, in the chapters devoted to a consideration of contagion, endemics, and local and general epidemics, cannot, certainly, be received as legitimate deductions from well established facts, or as successfully removing the difficulties with which the subjects referred to are encompassed, these chapters are still deserving of an attentive perusal. They contain a mass of very judicious remarks, and even when the reasoning of the author does not convince it will be found to interest from its ingenuity and the good faith with which it is evidently presented.

A very sensible chapter follows on the seats of diseases. The ensuing chapter on the tendency of disease, commences with the startling assertion, that "the *tendency of all* the various forms of disease, is *essentially*, and in their own nature *to death*, death either of a part or of the whole body." Although we do not believe in the existence of what the older physicians, and even some few of the present day, denominate a *vis medicatrix naturæ*, still, our pathological observations have certainly taught us that the tendency of the vital actions, when disturbed by morbific causes, is to return to their normal standard—and we have thought, that even when the morbid action has been such as to cause to a certain extent a change in the structure—a disorganization of a part—when the integrity of the part was not essential to the life of the organism, there was a tendency in its organic vital actions to diminish the extent of the disorganization and return it to its normal structure. We fear, that if the invariable tendency of all forms of disease was unto death, the mortality of all diseases would be greatly and fearfully augmented—for we suspect that Professor Dickson would not be will-

ing to admit that the "fatal tendency" is, in every instance in which recovery takes place, arrested by a well timed and judicious employment of remedial agents.

He has himself shown the inaccuracy of the assertion alluded to, when speaking, in a subsequent chapter, on periodicity, he remarks, that "rubeola comes to a spontaneous termination, in the great mass of cases, increasing, attaining its acme, and subsiding within eight days," and affirms, with regard to variola, scarlatina and vaccine, &c., that they progress, grow worse, reach their height, decline and disappear at familiar times, with entire regularity, and under familiar circumstances.

The chapter on inflammation, irritation, and congestion, is a very excellent one. The author's remarks upon these several morbid conditions, are marked by good sense. His views as to their nature and relation are worthy of attention, they certainly appear to obviate much of the confusion and contradictions into which writers have fallen in relation to the morbid conditions referred to.

His remarks on the pathology of fever are not marked by any thing of a very novel character—he adopts the long established distinction of fevers into symptomatic and idiopathic. He however admits it to be

"Highly probable, that no cause of disease possesses such indefinite extent of impression, as to act at once upon more than a single part; and besides, it is consistent with all analogy, to suppose that every cause of disease is determined to, and fitted to act specifically, or at any rate, specially upon one organ or tissue. It follows, therefore, or it is highly probable, that all disease is, to speak with logical precision, local in its origin."

The author waives any formal investigation of the merits of the various theories of fever which have, from time to time, flourished and sunk into oblivion, and he attempts to build no new theory of his own. His observations upon the leading points connected with the pathology of fever, are replete with good sense—and although the entire accuracy of some of them may be disputed, we cannot but admit their general plausibility and practical bearing.

On the question as to the natural tendency of fever to run a certain course and to terminate "in the restoration of health"—and whether it is possible or proper to arrest or cut short its course—the author remarks:—

"I have elsewhere stated my belief, that the tendency of all disease was [is] to disorganization. But the cause which produces disease may be transient in its influence or in its application, or it is removed by some change of circumstances; it is originally somewhat less than mortal in its intensity, or its force undergoes diminution; the excitability on which it first acted wears out; the predisposition to which it was adapted, is altered in some mode; the system becomes habituated and then callous to its irritation—as a ball will sometimes remain quietly lodged in a part which it had inflamed severely. Owing to some one or more of these conditions, all amounting virtually to a removal of the cause of disease, it comes to an end (*causa sublata tollitur effectus*) before its natural tendencies are manifested in their ultimate result—before death or disorganization has occurred. It is thus we explain the apparently spontaneous restoration of health, every day met with, and so apt to be attributed to the *vis medicatrix naturæ*—the restorative energies of the constitution."

We quote the above sentence to present an example of the manner in which Professor Dickson disposes of the facts manifestly opposed to his favourite theories.

We at the same time approve of the caution which he urges upon the young practitioner, not to place so much reliance upon the tendency, in any

disease, to a spontaneous solution, as to neglect those curative means which experience has taught us are adapted to cut it short or to moderate its violence and thus promote, so far as is possible, its favourable termination.

The author's account of intermittent fever—its pathology and treatment—is full and accurate. Notwithstanding one or two hypothetical propositions of minor importance, it will be found to present an admirable summary of all the well established facts and conclusions in relation to its causes, character, and ordinary progress, and a judicious exposition of the therapeutical measures adapted to its several stages and varieties.

The important subject of bilious remittent fever is very fully considered by Professor Dickson—his remarks in relation to its pathology are, in general, sound, and his directions for its treatment particularly judicious, and evidently the result of ample experience. He places, perhaps, too little importance upon direct depletion by the lancet or locally by leeches and cups, in the early stage of the disease. His therapeutical remarks are, however, it is to be recollectcd, made exclusively in reference to the disease as it occurs in the southern states, where, probably, depletion is less readily borne by patients labouring under this disease than in the middle and more northern states. He is a strong advocate for purgatives in bilious fever.—They are, unquestionably, when properly selected, well timed, and skilfully managed, an all important remedy:—they should be early commenced with, and may be continued, at short intervals, so long as the evacuations are of an unhealthy appearance. But it is not all purgatives that are alike proper and beneficial in this disease; those which produce much griping and watery stools are decidedly injurious:—Professor Dickson enumerates calomel as the most valuable; its beneficial effects may be augmented by combining with it various other purgatives. The proper management of purgatives in bilious fever is of no little importance, and we felt disappointed that the subject has not been more fully treated by our author.

The following excellent remarks are deserving of close attention. Speaking of the measures proper to be pursued by the newly arrived immigrant or visitor, in order to guard against an attack of bilious fever, the author adds,

"I cannot denounce too strongly the measures recommended by some, of active purging, at intervals, of low diet, of occasional blood-letting, of confinement within doors, and last, and worst of all, of mercurial salivation. Instead of being in any degree preventive of fever, all these rather tend to bring the system into that irritable condition so generally associated with weak and low action, and depressed tone or vital powers, which renders it more liable to be impressed by that class of causes which we style exciting and occasional. Experience, indeed, the surest and most infallible test, has not only proved their absolute inefficiency for good purposes, but has shown clearly enough their evil influences."

Some good remarks will also be found, in the present chapter, on the employment of mercury in bilious fever, with a view to its specific effects—the cases in which this treatment is alone proper—the extent to which it should be carried, and the evil consequences to which, when improperly managed or when carried too far, it is liable to give rise.

Yellow fever, which, to a certain extent, may be considered as the endemic of several of our southern cities, and as occurring in the form of a local and very circumscribed epidemic in a few of the sea-ports of the more northern states, has excited more controversy in relation to its mode of production, its pathology, and its treatment, than almost any other disease of common occurrence. There is scarcely any particular in regard to its origin, seat, character, and remedial management, upon which there is to be found a perfect accordance of opinion among those who profess to have

studied it with the greatest attention. Professor Dickson has given certainly a very able account of the disease. He believes that it is the effect of a specific and peculiar cause, which, in certain localities, is permanent and always active, while in others it exhibits only an occasional activity : that the cause of yellow fever is efficient only during the hot months of summer and autumn ; that the disease is contagious, in other words, that when it has been produced in an individual exposed to its unknown (atmospheric) cause, in the place where it exists, and at the season when alone it is active, it "becomes itself a generative centre productive of other cases, or of a morbid agent capable of producing them," and lastly, that the specific cause "is transmissible from any one centre to another, or from any one of its generating centres to a healthy locality," in two modes, "either by conveyance of a portion of atmosphere in which is diffused its undefined specific cause, as in the hold of a foul vessel, from any place where it prevails epidemically, or by the introduction of a sick body or any fomites imbued with its contagion."

That yellow fever may be generated by exposure to an atmosphere that has been rendered impure from the decomposition of animal and vegetable substances by the action of a high degree of atmospheric heat, has been proved by so many series of accurate observations as to place the fact now beyond dispute,—but that it is communicable by contact with, or by any contagion emanating from, the bodies of those affected with it, is a point, in proof of which, amid all the discrepant and contradictory statements that have been accumulated, we can perceive not the least evidence of a satisfactory and conclusive character—the weight of testimony being, in our opinion, decidedly opposed to the possibility of the propagation of the disease in this manner.

With the exception of his views in relation to contagion, which we cannot admit as well founded, the remarks of our author in relation to the circumstances and localities in which the yellow fever is generated and the individuals who are most liable to its attacks are accurate and interesting.

The usual phenomena of the disease, from its invasion to its close, and the several variations from its ordinary symptoms and progress, which occasionally present themselves, at different times and in different localities, are admirably delineated by Professor Dickson. The disease will readily be detected by any one who has studied with care the very striking and accurate description which he has given of it.

His remarks on its prognosis are deserving of close attention.

In regard to the pathological appearances presented by the bodies of those who die of yellow fever,

"It is in the stomach," Professor Dickson remarks, "we find the most uniform traces of disease. It is always inflamed, often in a very high degree; in this condition the smaller intestines usually partake, the duodenum especially." "Ffirth found the large intestines also in a state of inflammation, but this is not ordinarily or strikingly the fact. Pym, Peyre, and others speak of sphacelus of the stomach. This, if it ever happens, must be rare. I have never met with it, and my opportunities for examination have been numerous. None of our American physicians report any thing of this kind. Perhaps we may find in the following paragraph an explanation of such statements. 'I have seen,' says Dr. Physick, 'the inside of the inflamed stomach as black as the black vomit, resembling it in colour exactly. This colour differs very much from the dark purple of a part in a state of gangrene, and I have never observed any putridity attending it.' Erosions of the mucous coat are described by R. Jackson, Ffirth, and others. In one instance, and but one under my notice, some partial erosion with softening of this tissue occurred."

According to our author

"The liver does not present any constant appearances. In some it is soft, pale, and flabby; in others engorged with black blood. I have frequently found it in a natural state, as far as could be judged by the eye, and so say Ffirth and Jackson."

In the treatment of yellow fever, while the author admits that circumstances may call for the occasional employment of the lancet, the results of experience and observation are, he conceives, unfavourable to a general or even frequent resort to it. He urges the necessity of due caution and prudence in its use. "It is available only," he observes, "in the first stage of the disease, which rarely affords opportunity for its repetition." When resorted to, he directs the patient to be placed in a half erect posture, and from a large orifice, a sufficient amount of blood to be drawn at once to make a forcible impression on the system.

Professor Dickson prefers the cold bath to the lancet, he believes it to be "equally effectual in subduing morbid excitement and controlling irritation, without any positive expenditure of, or subtraction from the vital forces;" as often as the pungent heat of the skin and the restless tossing of the patient return, the cold bath is to be repeated.

After the cold bath, or in conjunction with it, calomel is the remedy upon which, in the majority of cases, the main reliance of our author is placed. He administers it in free doses, first as a cathartic, and subsequently, with the view of placing the constitution completely under its influence. He scarcely admits of any other remedies than the foregoing, excepting affusions upon the vertex and sinapisms to the epigastrum.

"As to the actual efficiency of this course," he remarks, "I am prepared to speak with confidence. In the whole of the practice in yellow fever which I have seen, I have not noted, nor do I recollect a single case, in which ptyalism was induced during the continuance of the first stadium or febrile paroxysm, which terminated fatally. Nor are examples wanting of an abrupt check being given by this means to the progress of the disease, after it had advanced into the second stage, new life being thus aroused in the prostrate constitution."

The whole of the author's remarks in relation to the treatment, based, as they are, upon the results of extensive experience, and in repeated epidemics of the disease, during the last twenty-five years, are deserving of close attention. He has, in our opinion, underrated the value of direct depletion by the lancet and by cups in the early stage of the disease, and has, perhaps, rated rather high, the efficacy of the mercurial treatment; his therapeutical directions, nevertheless, are upon the whole, peculiarly judicious.

The chapter on catarrhal fever contains a very good account of the disease, and some very sensible directions as to its management.

The all-important subject of typhus and typhoid fever, is discussed in the ensuing chapter. After a few sensible remarks on the difference in type, assumed by the different fevers and febrile affections, and the particular circumstances under which one or other type is most apt to occur, the author enters upon the question of the contagious character of typhus fever, the affirmative side of which he assumes, and maintains it to be "susceptible of ample proof." Notwithstanding he asserts that typhus fever possesses the "power of self-propagation," he admits "that it is not to be doubted, that a certain favouring condition of atmosphere, known from the days of Sydenham, as its epidemic constitution, must, at times, exist, in order to account for its more ready extension, and wider and more violent prevalence. The definite nature or character of this aerial predisposition, favour-

able both to the generation and propagation of typhus, is not known; it is probably, the product of many concurring elementary agencies."

The remarks just quoted, we conceive to be perfectly sound and to be borne out by all the facts that have been accumulated in reference to epidemics of the fevers under consideration, but they are by no means, in strict accordance with the views expressed by the author in his chapter on contagion, endemics, and epidemics.

Professor Dickson treats of typhus and typhoid fever under the same general head, he being satisfied of the identity of "all the modifications of continued fevers, collected by writers under these names," and he is "persuaded that, the more closely the subject is examined, the more this opinion is destined to prevail."

In his excellent description of the disease, he first delineates the ordinary course of the fever, and then dwells shortly upon the signs of functional disorder attendant upon its progress, and the organic lesions discovered after its termination.

"We shall thus," he remarks, "perceive more clearly, how readily all the modifications of continued fever run into, and mingle with each other, forming a series inseparably connected together."

Our author's description of the course of typhus fever is sufficiently accurate, and although from this, it will be evident that all the forms have a tendency to run into, and mingle with each other; still, in practice, the distinction of typhus and typhoid fevers can be very readily recognized, while it is of no little importance in a therapeutical point of view. The objections of the author to the accuracy of this distinction are, certainly, far from conclusive.

He describes the disease, under the two forms of typhus mitior and typhus gravior—the latter of which is comparatively of unfrequent occurrence in the United States.

In regard to the pathology of typhus, Professor Dickson considers, that a peculiar affection of the head is fairly to be inferred, but of a character not "clearly definable."

"It is surely," he remarks, "not simple inflammation, for typhus is not phrenitis. Nor can it be merely congestion, for there is very often increased activity and a sort of excitement." "Inflammation of the brain and its membranes very often ensues in the progress of the cases, but this, like intestinal ulceration, is a consequence and result of fevers generally; that they are seen most frequently in those under discussion, happens, I doubt not, from their long protraction and from the striking impairment of the vital powers, whose energies constitute the best defence of the system against every mode of organic change."

It would occupy too much space to enter into an examination of the somewhat minute details given by the author in relation to the treatment of the various grades of typhus fever, nor would it be doing strict justice to him, to present a bare enumeration of the remedies he advises, without entering into some detail as to the particular circumstances in which they are indicated, and the proper manner of their employment. He is an advocate, in the mildest cases, for "a gently purgative course, persisted in for a few days, and modified in its details by a careful observation of its effects." When the heat and dryness of the skin are prominent symptoms—especially when associated with great thirst, a small, corded pulse, flushed face, red eyes and delirium—the cold bath he considers highly beneficial; even when the patient is too weak to bear affusion or

immersion, both comfort and advantage, he remarks, will be derived from occasional sponging with water, vinegar or ardent spirits.

In obstinate or protracted cases, the mercurial treatment is the one upon which our author places his chief reliance. His general therapeutical directions for the management of all the grades of typhus fever are judicious, while there is much good sense exhibited in most of the details of practice given in the chapter before us. The author underrates, probably, too much the efficacy of depletion, both general and local, in the early stage of many of the cases of typhus fever; he, by no means, however, proscribes it, and, in certain cases where an evident tendency to, or an actual occurrence of local inflammation exists, directs the employment of cups in the neighbourhood of the affected organ. His rules for the employment of stimulants when the occurrence of the stage of prostration requires their use are in the main excellent.

The ensuing chapter treats of pneumonia typhoides, one of the most severe epidemics with which our country has been visited, and in relation to the true character and treatment of which, the most contradictory opinions have been entertained.

Of all the numerous denominations affixed to this proteiform disease, our author has selected the one which has received the most general sanction of medical men in the southern and middle states. In a large majority of the cases which he has seen, in different sections of our country and at different periods, there has been an inflammatory affection of the thoracic viscera, associated with that impairment of sensorial energy, and morbid state of vascular action which we meet with in typhus gravior. The affection of the thoracic organs is not, however, invariably present, "in many instances," he remarks, "the fatal progress of the attack has been determined without any definite relation to local affections of any kind," while, in some of the worst and most malignant invasions of this epidemic, it is the brain and spinal marrow which are affected, in others, the throat; and "a third and somewhat numerous class" of cases are "altogether anomalous, probably depending upon a morbid impression simultaneously made upon the whole sensorial system in all its wide expansion."

We must confess, that to call a disease typhus pneumonia, in a considerable proportion of the cases of which the lungs are altogether unaffected, strikes us as not simply an absurd misnomer, but as calculated to mislead the practitioner in regard to its pathology and treatment.

The author considers that the proofs of the propagation by contagion, of the malady in question, are not clear.

"Nor do we know," he adds, "distinctly its mode of origin. It has certainly some relation to the sensible qualities of the atmosphere, as its dampness and coldness, and it occurs most obviously in those peculiarly exposed to these agents, especially if the exposure be protracted."

It is a singular fact that the pulmonary form of the disease is far more prevalent in the southern than in the northern districts of country in which it has appeared. The disease has been observed, also, to be, in the eastern states, much more violent and fatal in low, swampy regions, in the neighbourhood of bogs, mill ponds, etc., while, in the lowlands of the south, equally damp, and vastly more subject to malarious fevers, nothing of the kind has been noticed.

"The petechiae on the surface, which were at first so prominent a symptom as to give both name and character to the malady under discussion, soon ceased to attract attention, and may be said hardly to have belonged to it when it reached

the country south of the Potomac. Yet, this was not merely the effect of modifying influences of climate, for they had, before this time, as it is affirmed, failed to exhibit themselves in cases occurring in the native localities of this strange pestilence."

A good account is presented of the ordinary form of the disease, as it occurs to the south, which is that of pneumonic inflammation or congestion, attended with general typhoid symptoms of more or less intensity. A brief notice is likewise taken of some of its singular anomalies.

In the treatment of typhus pneumonia Professor Dickson condemns the use of the lancet excepting "in attacks marked by a predominance of the tokens of obvious inflammatory excitement."

In the commencement of the attack he has been much pleased with the effect of the administration of an emetic, or an emetico-cathartic—excepting in cases of early prostration and extreme muscular debility. In these latter cases, he directs a resort at once to the moderately stimulating dia-phoretics, as camphor, nitrous ether and the carbonate and acetate of ammonia, combined with opium in the form of Dover's powder, the efficacy of which means will be much aided by the application of heat in various forms to the surface of the patient and in pediluvia. Sinapisms and epispastics in the neighbourhood of the internal organ most affected, and to the extremities, are likewise recommended. When the strength of the patient begins to fail, stimulants are to be resorted to, and employed with a freedom commensurate with the urgency of the case.

The full and free use of opium throughout every stage, and in every modification of the disease, is spoken of by our author as a highly beneficial and even indispensable practice.

Professor Dickson has never had occasion to press the mercurial treatment to any extent in pneumonia typhoides; it has been, however, highly recommended by others.

A very excellent chapter follows on hectic fever, which is succeeded by one on syncope. The latter is, however, so invariably a symptomatic affection, and is of such secondary importance compared with the several morbid conditions of the system during which it is liable to occur, that we feel somewhat surprised to find it treated as a separate disease by so judicious a writer as Professor Dickson. When it occurs as a mere effect of mental emotion, it is ordinarily of such short duration as seldom to fall under the notice of the practitioner. The cases described by our author, in which there is a decided "determination of blood to the head," and the recovery from which "is apt to be attended by an unsafe degree of reaction," to control which "even the lancet may become necessary," are certainly not instances of syncope in the proper pathological acceptation of the term.

The account given by the author of angina pectoris, though upon the whole sufficiently accurate, is, in some few particulars, amenable to criticism. His views in regard to the nature of the disease will be found true, we apprehend, in relation to but a very few cases. He considers it to be a "functional disease of the heart itself, neither dependent upon a disordered state of the stomach, nor on a gouty diathesis"—"although each of these contingencies must be acknowledged to be among its efficient predisposing and occasional causes." Nor does he admit of its being necessarily connected with any organic change in the structure of the heart or of its vessels, though "it is found to be, in certain subjects, coincident with the presence of such changes." The views here stated are, we are told, based

"upon the occurrence of cases, in which, upon dissection, no morbid alterations of any organ or part could be discovered," and upon the fact that all other muscles are subject to cramp or spasm, while "there can be no reason alleged why the heart should be exempt from this general liability."

It would occupy too much space to enter into an examination of our author's explanation of the pathology of the disease under question, and to point out its fallacy. Those who would wish to study the question, in regard to the circumstances under which angina pectoris ordinarily occurs, and the frequency with which it can with propriety be considered as an organic or functional disease, will find it very ably discussed by Dr. Forbes, in the Cyclopædia of Practical Medicine.

Professor Dickson's directions for the treatment of angina pectoris are unexceptionable; they are but little influenced by his one-sided opinions in regard to its pathology.

The subject of hemorrhage is next considered. The account of the individual hemorrhages being preceded by a very admirable—condensed, it is true, but clear—examination into the general pathology of the spontaneous discharges of blood which constitute the hemorrhages of nosological writers, with some remarks upon their treatment. The author's account of epistaxis, hemoptysis, hematemesis, hematuria, hemorrhage from the mouth, gums, fauces and tongue, and intestinal hemorrhage, is tolerably full and accurate. Some few points in the pathology of these several affections, upon which recent observations have thrown additional light, are, perhaps, too briefly noticed; and one or more therapeutical agents of some value as means calculated very effectually to arrest the discharge of blood, are unnoticed.

The consideration of the dropsical affections follows. The author's general remarks on the subject of their pathology and treatment will be found replete with good sense and sound and judicious views. We do not believe, in any instance, that dropsy can be considered as a primary or idiopathic disease; but in the sense in which our author would appear inclined to admit of the occurrence of idiopathic dropsy, as a dropsy unconnected with any local organic disease, we see no great objection to the distinction. Dropsical effusion does occasionally occur in individuals labouring under great general debility, and, probably, an impoverished condition of the blood, independently of organic disease of the heart and great blood-vessels, or of either of the other organs—so far, at least, as we are able to discover—and in such cases the effusion may, without any very gross violation of pathological language, be denominated idiopathic.

Paracentesis is the only remedy to which we can resort, as a means of relieving the patient's sufferings and prolonging his life, in those cases where we are unable by our remedies to prevent or reduce the accumulation of fluid within the peritoneal sac, so that the abdomen becomes distended to such an extent as to impede respiration, to preclude the possibility of rest in the recumbent posture, and to endanger even rupture of the abdominal parietes. Under such circumstances, no physician would be warranted in abstaining from its employment. But, at the same time, we are to recollect that it is only a palliative, the effects of which are but temporary; and that it should not be too early resorted to, for, notwithstanding Professor Dickson considers it to be unattended with inconvenience or danger, our experience has taught us, that after each time the fluid is drawn off in this way, it again accumulates with increased rapidity, so as to render the intervals of the operation to be constantly diminished, while

in the numerous instances in which we have performed it in cases of ascites, we do not recollect a single one, when it was frequently repeated, where the patient was not destroyed by acute peritoneal inflammation.

The term hydrothorax, dropsy of the chest, Professor Dickson would restrict to cases of serous effusion within the chest, coincident with serous effusion elsewhere, either in the general cellular tissue, or in the cavity of the peritoneum. In such cases, the effusion within the thorax, "no matter though consecutive upon previous disease," he would regard "as idiopathic, because built upon the hydropic diathesis, an essential character of the history of true dropsy." Effusions *entirely local*, occurring as the result of previous inflammation in the part, and subsequent organic lesion, he "would refuse to consider as properly dropsical."

We see no important practical advantage that can result from the foregoing distinction, even admitting, which we do not, that any permanent accumulation of a serous fluid in the thorax ever does occur, without more or less effusion occurring in some part of the external cellular tissue.

The chapter on hydrocephalus or dropsy of the head, is one of the most unsatisfactory in the whole work. The author has evidently confounded dropsy, strictly speaking, of the brain, in which the serous effusion within the cranium is the most important circumstance, with certain forms of arachnoidal inflammation, particularly that connected with the development of tubercles upon the meninges and superficies of the brain, and in which the serous effusion is often very small in amount and always of secondary importance. Hence, there is a confusion in the remarks contained in the present chapter, some of them being applicable to one form, while others of them have reference to another and very distinct form of cerebral disease.

Even in relation to that form of encephalic disease, known among medical writers as chronic hydrocephalus, the account given by our author is particularly defective.

A short chapter is devoted to the consideration of scrofula. The remarks contained in it are excellent so far as they go; the author has not, however, gone very deeply into the pathology of that particular morbid condition of the system which gives rise to what are termed scrofulous affections, and has overlooked a large number of important facts that have been established in regard to many of the phenomena, the production of which have been referred to it.

The next class of diseases treated of are those of the digestive system. Under this head a very interesting and tolerable full account is presented of the milk-sickness; that singular form of disease, confined exclusively, so far as Professor Dickson is aware, to the Southern and Southwestern States of our Union:

"It derives its name from the fact, that as occurring in the human subject, it is most frequently met with as the consequence of eating milk, rendered poisonous by the diseased condition of the cow from which it was taken."

It never affects directly the human subject, but is produced on him exclusively by the use of the milk, butter, or flesh obtained from herbivorous animals labouring under the disease. Carnivorous animals are also liable to be attacked by it, if they eat of the diseased flesh.

It has been referred, among various other causes, to some unknown vegetable poison, confined in its growth to the fertile coves and deep rich valleys, where the disease occurs endemically. This hypothesis appears

to Professor Dickson to be favoured by the exclusive liability to the disease of the herbivorous animals.

"The accounts which have been given of this disorder from various sources, lead me," remarks our author, "to the belief, that it is a species of gastritis or gastro-duodenitis. Languor and lassitude are among the earliest symptoms of the attack, soon followed by nausea and vomiting, with great oppression at the epigastrium, and pain, with a sense of heat and burning in the stomach. The thirst is great; the skin soon becomes hot and dry: the eyes are red and suffused, and glassy, and, as some say, a peculiar odour is exhaled from the surface. The pulse is affirmed, by some, to be little changed from its ordinary condition, while others declare that it presents a frequency and tension resembling that of typhus fever, to which, indeed, the whole history of this remarkable disease, after the first stage is past, presents a striking resemblance. Patients recover slowly and imperfectly, remaining long after, and perhaps for life, subject to indigestions and other complaints of the stomach."

Professor Dickson presents nothing very satisfactory in regard to its proper treatment.

The chapters on colic and cholera, both sporadic and epidemic, contain very excellent accounts of these affections. But the author's opinion of the contagiousness of the latter is certainly not well founded. There is not upon record a single fact in proof of the disease being communicable from the sick to the well, while the testimony in proof of the non-contagiousness of the disease is ample and overwhelming.

Diarrhoea and dysentery receive the full attention their importance demands. In regard to the pathology of both diseases the author is, perhaps, somewhat deficient in details; he has, certainly, overlooked many of the important facts, derived from the observations of the surgeons in the employ of the East India Company, which tend to throw light upon the different forms in which the latter affection, especially, presents itself under particular circumstances and in different localities.

In regard to the treatment of both diarrhoea and dysentery, the directions of the author are, upon the whole, full and particularly judicious.

The chapter on cholera infantum is altogether unsatisfactory. The author has not succeeded in either describing the disease, indicating its true character, or pointing out its proper treatment. Of the facts recorded in relation to its morbid anatomy, he has taken no notice. That the cholera of infants is an affection readily distinguishable from the ordinary forms of diarrhoea to which they are subject, and is an essentially different disease from the dysentery of young children, must be evident to every one familiar with the affections incident to the earlier periods of life during the intense heat of our summers. We are inclined to believe, that, in a certain sense, cholera infantum is a specific disease; that is, a disease depending upon a particular lesion of the intestinal mucous membrane, and which occurs only once in the same individual.

The author has entered very fully into the consideration of the pathology and treatment of jaundice; his views are, in general, correct, and his therapeutical directions sufficiently minute and judicious. There is nothing, however, in his account of the disease of a novel character, or which demands particular criticism.

Under the very indefinite name of *sore throat*, Professor Dickson treats of the several inflammatory affections of this part. The pathology of these is very briefly discussed. The directions for their treatment are detailed with sufficient minuteness, and are in general such as are sanctioned by general experience.

The diseases of the respiratory system are next considered. The account of the pathology and therapeutics of the several affections of this class is preceded by a very succinct and somewhat incomplete inquiry into the methods in use for the exploration of the diseased conditions of the thorax. This is an all-important subject—attended with great difficulty to those who have had little practical experience in relation to it, even when it has been studied by them with the utmost minuteness and care; but utterly incomprehensible to those who have acquired but superficial views of the proper nature of the indications which the exploration of the chest is calculated to impart, and the signs by which these indications are imparted.

Croup is described as “one of the most common diseases of childhood.” This is not strictly correct, for, though a frequent disease, it is by no means to be compared in this respect with a number of the other affections of infancy. Nor can it with propriety be considered, even “when opposed with promptitude and judgment,” as “among those maladies over which the power of medicine exhibits *most clearly* its divine control.” Genuine croup is a disease of a most dangerous character; the deaths annually produced by it in those situations where it prevails the most extensively, form a very prominent item in the bills of mortality. In Philadelphia, during the last year, 179 deaths are recorded from this disease, being rather more than one-fifteenth of all the deaths in children under fifteen years of age.

In regard to the author’s remarks on the gastric origin of croup, founded upon the rapid solution of the symptoms upon “some crudities, such as green fruit or other improper *ingesta*,” being brought away by the operation of an emetic—we should strongly suspect, that in some of the cases referred to in support of this opinion, the disease was not genuine croup, but laryngismus stridulus, which we have often seen suddenly removed in the same manner.

To Professor Dickson’s exposition of the treatment of croup there can be no reasonable objection. The remedies he directs, when well timed and properly managed, are acknowledged by all practitioners to be those best adapted for the control of the disease. Tracheotomy (bronchotomy as our author terms it) is recommended in cases where suffocation is imminent. The success of the operation is, however, at best but doubtful. As to the cases and period of the disease in which alone it can be resorted to with any hope of affording benefit to the patient, some interesting facts have been recently developed by one or more of the continental physicians. These Professor Dickson has not noticed.

Bronchitis, in its acute and chronic forms, is very fully considered. The author’s account embraces a synopsis of all the leading facts in relation to its pathology and treatment.

Pneumonia, pleuro-pneumonitis and pleurisy, are all treated of in a short chapter; the account given of each must necessarily be incomplete. The several forms of pneumonic inflammation—the accurate diagnosis and proper treatment of which are subjects of no little importance—demand that the inflammation of the structure of the lungs should receive a very full and separate consideration; we can, indeed, see no good reason for treating of pneumonic and pleuritic inflammations under one head. Their respective phenomena are certainly sufficiently marked to prevent the two diseases from being confounded, while their diagnosis is not a matter of indifference.

Phthisis pulmonalis is the subject of a very long and able chapter. If the author cannot be said to have exhausted his subject, he has presented,

except in regard to its diagnosis, a sufficiently accurate outline for the use of the student. The most important points in relation to consumption are, 1st, the accurate diagnosis between those forms of pulmonary disease that give rise to the general symptoms of phthisis, but which we are frequently able to remove by an appropriate treatment; and true tubercular phthisis, for the cure of which we have discovered as yet no remedy; and 2dly, the means of determining the earliest period of the development of tubercles in the lungs, when, it is more than probable, their progress may be arrested and the life and comfort of the patient prolonged. On neither of these points are the details given by our author sufficiently full and explicit.

A chapter on asthma—of many of the forms of which, of very frequent occurrence, the author has given no account—and another on whooping-cough, conclude the account of the diseases of the respiratory system.

The consideration of the pathology of the latter affection Professor Dickson dismisses with the following brief remarks:—

"The pathology of hooping-cough is obscure. There exists in the mucous membrane of the whole respiratory apparatus, a very peculiar irritability, morbid in nature and intense in degree, which gives rise to vehement paroxysms of convulsive cough, and is attended by, or productive of, an inordinate determination of blood to the organs affected; this, in its turn, results either in oppressive congestion, or a violent inflammation, with its disastrous consequences."

The diseases of the sensorial system are the subjects of the seven ensuing chapters. Insanity is treated of under the head of chronic phrenitis.—But, although the author regards "chronic phrenitis as principally, if not exclusively, exhibiting itself in the various forms of insanity," still, he does not wish to be understood as asserting or implying "that every case of mental derangement depends upon, or proves the existence of organic lesion of the brain from inflammation of some part of its substance. This, he adds, although perhaps probable, and, as a hypothesis, consistent with the great mass of observed facts, is by no means so clearly made out, that it may be proposed to you as an established principle or doctrine."

Of the pathology of chronic inflammation of the substance of the brain we know but little; that little, nevertheless, shows that it has but a very slight connection with the major portion of the cases of insanity; too slight, at least, to warrant the foregoing remarks of Professor Dickson.

It would be unfair, however, to criticise very closely the views of the author in relation to the pathology of mental derangement; he having premised that they "are not sufficiently matured and settled to justify him in communicating them with any degree of confidence."

He has given, it is true, a very interesting outline of many of the leading facts in relation to the subject of insanity, interspersed with not a few sound and judicious remarks; his pathological deductions are, however, throughout, imperfect and one sided.

For the cure of mania-à-potu, the author points to opium, given in sufficient doses to procure speedily the sleep of the patient, as the remedy upon which our chief dependence is to be placed. We are convinced ourselves, of the very great importance of opium in the treatment of the generality of cases of the delirium of drunkards; it is a remedy, however, which requires some degree of caution in its use, and a nice discrimination of the cases to which it is adapted as the chief remedial agent. The plan recommended by some, and countenanced by our author, to give it in large doses at short intervals, "one, two, or three hundred drops of the tincture every

hour, until the patient becomes quiet or sleeps"—is one, we fear, that will as often eventuate in his destruction, as in the cure of his delirium. In many cases, the author admits, "it would be advisable to premise the lancet, a cathartic or emetic," before commencing with the opiate treatment. In a large number of cases, we should rather say the safety of the patient demands that the use of opium should be refrained from entirely; in many, a complete solution of the disease may be obtained by quietude and proper nourishment alone, or in connection with these by very moderate doses of opium. We are persuaded that in first attacks of the delirium of drunkards—especially in the young, or even in those which occur in persons who have for years been addicted to the habitual use of alcoholic drinks, when a strong tendency to congestion or inflammation of the brain exists, bleeding either from the arm or locally, from the scalp, by cups, is an important remedy, which cannot be neglected with safety to the patient. In the old and confirmed inebriate, with a broken down constitution, opium in moderate doses may, with propriety, be commenced with at once.

A very good account is given of apoplexy, palsy, chorea, and epilepsy, in the chapters devoted to their consideration, and a full and judicious exposition of their treatment.

In the chapter, also, on neuralgia, will be found a very interesting exposition of the leading facts and prevailing opinions in relation to those affections, the prominent feature of which is pain, often occurring in paroxysms, and of a most intense character, unaccompanied with inflammation or any appreciable organic change in the parts in which it occurs.

The pathology and treatment of rheumatism constitutes the subject of the next chapter. The generally received views in regard to its seat and character are advocated by the author, and the remedies ordinarily depended on for its cure are recommended.

The author denies the common connection between inflammation of the heart and its consequences, and external rheumatism.

"Let me distinctly declare my belief," he remarks, "that the frequency of this connection between ordinary rheumatism and carditis has been enormously exaggerated by certain modern pathologists."

This question must, however, be settled after all by statistics based upon an extensive series of careful observations.

Rheumatism, according to Professor Dickson, is, in the region of country in which he resides, "one of our most familiar maladies," and yet in a practice of a quarter of a century, he has seen and known but two cases of internal rheumatism.

The chapter on gout, although it presents a very good history of the ordinary form of the disease, and a correct exposition of the circumstances under which it most usually exhibits itself, together with a sensible summary of the plan of treatment best adapted for its prevention and cure, contains nothing new or particularly striking, either in regard to its pathology or therapeutics.

In the chapters which treat of the diseases of the excrent system, we are presented with an account of small-pox and the varioloid affections, vaccinia, rubella, erysipelas, scarlatina and dengue. Although it may be questioned whether the author is correct in arranging all these affections as diseases of the excrent system, we have no disposition at present to enter upon the discussion of the true pathology of erysipelas, measles and scarlet fever. The author's account of the several affections just enumerated is, upon the whole, correct, while his directions for their treatment are in

accordance, in their general outlines, with the experience of the major part of the profession in this country as well as in Europe; of one or two remedies, upon which much stress is laid by a few respectable authorities, the author has taken no notice, and upon others he has not, perhaps, insisted so strongly as some of his readers may deem their importance requires. The accuracy of his leading indications will not, however, be disputed, and the therapeutical means he has indicated for their fulfilment, will be found, probably, as effectual as any of those he has overlooked or noticed without recommendation.

The account given by Professor Dickson of the dengue, is among the best we possess of that strange malady; which, during a few months, spread over the West India Islands and the neighbouring coast of the American continent, attacking almost every inhabitant of the places which fell within the sphere of its epidemic influence, and then ceased, and as it were became extinct; no regular or well defined case having occurred since the winter of 1828. The author published an account of the disease in question in this Journal for Nov. 1828, and subsequently, in Bell's Medical Library, for the year 1839; of this the chapter in the work before us is the substance; it is therefore pretty extensively known to the profession, and renders any notice of it on our part unnecessary.

The work closes with a short notice of the diseases of the urinary organs.

In the foregoing notice of the pathological and therapeutical essays of Professor Dickson, we have not attempted an analysis of their contents, our sole aim being to present to our readers some idea of their general scope and character. In a more extended review of the work, we might certainly have done more ample justice to the author by presenting, in stronger relief, those portions of it which merit particular attention, from the sound views they present in relation to the causes and character of disease, or the means adapted to its removal. In the brief notice we have given, we have, however, endeavoured to do full justice to the author's claims as a medical writer. When, upon any point of importance we have believed his teachings to be erroneous, his facts defective, or his deductions invalid, our opinion has been freely expressed; the more freely from our conviction that the work before us is destined to become a somewhat popular one with our southern and western physicians, and, from the character, influential position, and acknowledged talents of its author, to exert a very marked influence upon medical opinion and practice.

Had the work been presented as a complete system of pathology and therapeutics, it would not have claimed even so large a share of our attention as we have given to it; but, simply as a series of essays—in which are set forth the views and experience of the author in relation to the nature and management of the respective diseases of which they treat—we cannot but view it in a much more favourable light. It is unquestionably one that will be read with interest and not without considerable profit.

In his account of the character, seat, and causes of the several morbid affections comprised in the volumes before us, Professor Dickson has, in our estimation, laid himself more frequently open to criticism than in the views he has expressed in relation to the means best adapted for their removal. He has certainly overlooked and undervalued a large mass of the facts for which we are indebted to the industry of recent observers; and in his very just condemnation of the extravagant pretensions of many of the pathological anatomists—who would circumscribe the whole of pathology to the study of the appearances detected in the different tissues and organs

of the body after death—he has placed too little value upon the important light which may be derived from this source to aid us in our investigation of the true seat and character of diseases.

His practical indications are, in general accurate, and the means laid down for their fulfilment judicious. He is a stronger advocate it is true, for the “mercurial practice,” and resorts to it more frequently than would be approved of by the generality of practitioners in the more northern states, whose experience has not taught them to expect from the practice the same amount of good as is attributed to it by him. He is also more sparing in the use of the lancet, as well as of local depletion, than would suit the views of the physicians in this vicinity, and is opposed to the employment of direct depletion in diseases and under circumstances where they would consider one or other to be strongly indicated, or even necessary to the safety of the patient. It is not at all improbable, however, that difference of climate and locality may so influence the character and progress of diseases, as to explain the opposite opinions entertained of blood-letting, and the other remedies recommended in their treatment, by physicians of experience and observation practising in different countries or in different portions of the same country. It is in this manner only that we can explain the discrepant statements made by members of the profession —of whose honesty we can have no doubt—in regard to the efficacy, in various affections, of the different remedial agents proposed for their cure.

D. F. C.

ART. XII.—*Traité Elémentaire et Pratique de Pathologie Interne.* Par A. GRISOLLE, D. M. P., Médecin des Hôpitaux et Hospices Civils, &c., &c. En deux volumes, Svo.: pp. 1724.

Elementary and Practical Treatise of Internal Pathology. By A. GRISOLLE, D. M. P. Paris, 1844.

So entirely has the attention of French pathologists for many years past been absorbed in the study of specialties, that they would seem to have found no time to sum up in a concise and manageable form the vast amount of information they have collected. Valuable monographs in abundance have been published, either in separate volumes, or in the admirable dictionaries or encyclopedias, which have issued from the French press, and which will be found to exhaust, as far as our present scientific knowledge will allow, the subjects upon which they treat. To the student, however, they are almost sealed books. He wants to know simply what are the facts of science; to have them classified and arranged in such a manner, that, at a single glance, he can master the results of the labours of other men, without having to search for them amid the theories and opinions of medical philosophers. So, too, does the general practitioner, who looks for conclusions and facts, and not arguments and theories. Neither of them have time to spend upon the latter. Yet strange to say, no work existed in France to which they could recur for a brief and clear exposition of these matters, and its want had begun to be felt.

M. Valleix was the first to attempt to meet the case, and in his “*Guide du Médecin Praticien*,” a work of great merit, but which has not yet been completed, has laid before the profession an admirable practical treatise.

But the range of discussion is too great and extended for a mere manual, and, therefore, there still were room and a demand for such a work as we have suggested above.

At about the same period MM. Behier and Hardy, and M. Grisolle commenced the publication of treatises upon internal pathology, which might serve as manuals. The former, young men, scarcely known to science, but full of zeal and knowledge, entered hopefully upon their task, and have presented us with the first volume of their work, which certainly promises auspiciously for the whole. Our intention, however, in the present notice is not to draw comparisons between it and the finished work, of which we have placed the title above, but simply to endeavour to give some idea of the extent and character of the latter.

Had we selected among the younger men of Paris, one, whom from our acquaintance with his history and writings we should consider best qualified to present in a condensed and satisfactory form the whole science of internal pathology, we hardly think it possible to have named another than M. Grisolle. His habits of untiring industry, the admirable school of observation, founded by M. Louis, in which he has been brought up under the worthy master and friend M. Chomel, to whom he renders the homage of this work; his long connection, of fourteen years, with the Parisian hospitals; the fairness, liberality and ability which have characterized his previous writings, all pointed to him as a fitting person to carry successfully through such an undertaking. With such an opinion of the man, we now propose to examine how far he has fulfilled expectations, and to endeavour to show what rank in medical literature his book should hold.

In his preface, he lays before the reader his motive for entering upon this undertaking, viz., his desire to fill the void occasioned by the want of a work which summed up faithfully the principal discoveries in internal pathology. Conscious of his own defects, but filled with zeal for the task he had entered upon, having carefully examined the best authors, and subjected their conclusions, when it was possible, to the test of his own experience during his connection with the hospitals, believing fully that the only method of arriving at fixed results, consisted in the adoption of the analytic and numerical method, as exhibited in his previous works, and determined to make that use of the materials within his reach, which his independence of position and truth enabled and required him to do, M. Grisolle disclaims any intention of willingly overlooking the writings of any of his fellow-labourers in the same field, where these writings consisted of any thing but mere theoretical opinions.

Having thus defined the position he intended to occupy, M. G. proceeds to state that he has distributed into nine distinct classes, all the diseases properly comprised within the limits of internal pathology: viz., 1. Fevers. 2d. Diseases consisting in a change in the constituent proportions of the blood. 3d. Inflammations. 4th. Morbid secretions. 5th. Poisonings. 6th. Lesions of nutrition. 7th. Organic transformation and accidental morbid productions. 8th. Neuroses. 9th. Diseases peculiar to certain organs. He has adopted this classification only after mature reflection and much consultation, without, however, believing it to be free from objection, or that it is possible, at least in the present state of medicine, to establish any system which will have the regularity and precision of those in other branches of natural history.

Special pathology is the exclusive subject of this work, M. G. referring the reader for extended views on general pathology and semeiology, to

other treatises, and especially to that of M. Chomel, "a work which is, without contradiction, the most remarkable introduction we possess to the study of practical medicine." M. Grisolle hopes, however, that although he addresses himself especially to those entering upon the career of medicine, he may have also written that which will be equally useful to practitioners.

We are thus brought to the consideration of the first class of diseases, fevers; diseases of which the number gradually diminishes in proportion as the progress of science develops new means of distinguishing between the primitive or essential, and the consecutive or symptomatic forms. That there are fevers of the former kind, in which the febrile movement appears to constitute the whole affection, with which divers alterations, both of the solids and fluids, may co-exist, but almost always consecutively to the fever, and insufficient to account for it, M. Grisolle does not, for one moment, doubt; but at the same time he recognizes, as he had previously done in his observations on pneumonia,—so often observed to occur in the course of febrile attacks—the important pathological law established by M. Louis, as the result of numerous observations, that the prolongation of a fever may become a cause of more or less profound lesions in many of the viscera,—the number and extent of these being proportional to the intensity and duration of the febrile movement.

Our author divides fevers into five distinct kinds: 1. Continued fever, comprehending seven species; the ephemeral, the inflammatory, the typhoid and European typhus,—the only kinds observable in the climate of Paris,—the typhus fever of the English, the bilious fever of warm climates, the yellow fever and the Eastern typhus. 2d. Eruptive fevers; variola, varioloid and varicella, rubeola, scarlatina and the *suite miliaire*. 3d. Intermittents, benign, pernicious and anomalous. 4th. Remittents, or pseudo-continued, "which might, perhaps, rigorously be considered as a simple variety or sub-genus of the intermittents;" and 5th. Hectic, slow or chronic.

The term typhoid fever is used by M. G., as by recent pathologists generally, to designate that form of disease which has for its peculiar lesion the swelling and alteration of the intestinal follicles, and of the corresponding mesenteric glands, because, without determining any thing relative to its nature, it is sufficiently significant of its most important train of symptoms. Although the characteristic lesions of typhoid fever are certainly inflammatory in their nature, they have not the power, when they are the only evident lesions, of augmenting the quantity of fibrin in the blood, as the phlegmasiae have; a circumstance which M. Grisolle considers remarkable, and which shows that this disease is properly retained among the essential fevers; for MM. Andral and Gavarret have clearly shown, by their experiments, that in it, as well as in the other essential fevers, the amount of fibrin either remains normal or is diminished, the diminution, when it occurs, coinciding with the setting in of what are commonly called typhoid, or a low form of symptoms. The prolonged duration, one of its most remarkable features, and an examination of the blood, are consequently among the most important elements in its diagnosis, where other symptoms are doubtful; nor should it be forgotten how important it is to be able to form a satisfactory diagnosis of this disease, for it is always serious, however light the attack may appear, from the liability to intestinal perforations, which are always possible, even during apparent convalescence, and almost necessarily fatal.

That this disease is contagious, does not, in the opinion of M. Grisolle,

admit of question, particularly since the publication of M. Gendron's paper upon the epidemics of small localities; still, it must be admitted that this mode of propagation is much less evident, says the author, than in many other diseases, and that cases of spontaneous origin are far more frequent than those which result from contagion; a proposition which M. Gendron doubts. The treatment of this disease is eclectic, and is mainly that recommended by MM. Chomel and Louis, to whose valuable works the author is indebted for the groundwork of his article. The cool manner in which he speaks of his experience in regard to the different modes of treatment which have been recommended in typhoid fever, is certainly characteristic of the modern French schools of therapeutists, who seem to consider human beings as fitting subjects for experiments, sometimes of the most dangerous kind.

Typhus fever, or the European pest, which, until the suggestion of M. Chomel in 1834, of its probable identity with typhoid fever, has been regarded, and is, by most medical writers, still considered, as an independent and separate disease, has, according to M. Grisolle, been proved to be entirely identical with typhoid fever, by the valuable publications of M. Gaultier de Claubry, (t. 7, *Mém. de l'Acad. de Méd.*,) and the excellent account given by M. Laudouzy of the typhus in the prison of Rheims in 1839 and '40. Without entering upon this interesting question, which is now exciting much attention, we will content ourselves with giving the opinion of M. Grisolle, which is thus expressed.

"In fine, there is complete identity between the typhus and typhoid fevers, in their anatomical lesions, their symptoms, their march, the forms of the disease, their contagiousness, and the immunity after a first attack. I repeat, there is not any capital difference between these two affections, but merely shades of distinction, due, without doubt, to the unfavourable circumstances under which typhus is developed. M. Laudouzy is, I think, wrong, in the presence of the facts he has so well observed, to deny the *identity* of the two diseases, and to believe them to be only *analogous*. Such an opinion is not admissible; and is, besides, amply refuted by the very observations of this distinguished physician, the slight differences he has pointed out being, without doubt, due to the character of the epidemic."—I. 58.

The typhus fever of England and of this country, however, M. G. considers an entirely distinct disease, and one entirely unknown in France; the facts upon which this opinion is founded, are drawn from the able papers of Dr. Shattuck, of Boston, relative to the disease as he observed it in London, and of Dr. Gerhard, giving an account of an epidemic in Philadelphia, and of M. Valleix, who has made a valuable commentary upon the two papers named before, in an article in the 5th vol. (3d series) of *Arch. Gén. de Médecine*. M. Grisolle takes occasion here to speak in high terms of the ability of our countrymen, with whom he had enjoyed frequent opportunities of friendly and professional intercourse in Paris, and in whose faithfulness and intelligence he had the highest confidence.

We may, perhaps, not inappropriately here advert to some of the happy effects resulting from the visits of our young countrymen to Paris for the purpose of prosecuting their medical studies in that admirable school. A free intercourse has sprung up among some of the most intelligent of them and the ablest and most prominent medical men of Paris, for which they are indebted to their orderly deportment and assiduous attention to their studies, qualities which the Parisian teachers were not slow to discover, and of which they have shown their appreciation by placing within the reach of the students every means of improvement in their power. To

M. Louis are these acknowledgments especially due; he having ever shown himself the friend of the Americans, because he found them to be worthy of this confidence, and ever prepared to reciprocate his kindness by respectful attention and personal esteem. Working together with him in the *Société d'Observation*, of which he is the founder and perpetual president, and which, while it enrolls among its members most of the prominent and most laborious younger medical men of France—among whom not the least distinguished is M. Grisolle—also numbers many young Americans; they formed intimacies with each other, by which the characters of all were subjected to the severe test of personal acquaintance and constant observation. These remarks are, to a certain extent, called for, to explain, in part, why M. Grisolle should have selected the paper of Dr. Shattuck, independently of its intrinsic merit, as the authority upon which his opinions of the typhus fever of England are founded. He knew his method of observation, and he could rely fully upon it. The same remark may apply to other members of that society, Dr. Gerhard, Jackson and Stewardson, whom he honourably quotes in the course of his work, with the firmest assurance of their accuracy, and in preference to authors of whom he knew nothing personally.

But to return again to the farther consideration of the work before us. A short account of the bilious fevers of warm climates is presented, not from any personal knowledge of them, but in order to avoid passing over a disease described by the English authors. The only distinction, however, he notices between this and remittent fever, is, that in the former the remissions are not constant, and that all authors agree that bark is detrimental in its treatment,—peculiarities which, if they really existed, are certainly not sufficient to establish a nosological distinction.

The chapter on Yellow Fever is based upon M. Louis's admirable work giving an account of the epidemic at Gibraltar in 1828, and the documents of M. Chervin on the etiology and mode of transmission of the disease. This work of M. Louis is certainly the most valuable we possess on yellow fever, and, indeed, is the only statistical account of it extant. But it is too apt to be forgotten that M. L. does not pretend to give a history of yellow fever, but simply of what he saw in that particular epidemic, and hence he is found fault with for making statements which he never uttered. As regards the anatomical lesion which he found to exist in every fatal case, the pale, anemic, yellow colour of the liver, and which, from the universality of its existence there, he supposed to be characteristic of yellow fever, other observers have stated that such is not the case at other times and in other places. Thus, M. Rufz, observing at Martinique in 1839-41, says that he found the liver unaltered in one case out of three, though M. Dutrouleau, a distinguished physician of the French navy, observing, in the very same epidemic at Martinique, confirms entirely M. Louis's statement, never having found the yellow liver wanting in 100 autopsies. Dr. Nott, in a paper in the last number of this journal, confirms the general conclusion of M. Rufz, that in Mobile the yellow liver is not always present. In view of this diversity of statements we must await farther observation to settle this interesting question.

Without deciding that yellow fever is not contagious, a view which he is inclined to adopt, M. Grisolle says that he is convinced that contagion is not the *ordinary mode* of its propagation,—persons who are subjected to the same causes being liable to take it, but not to communicate it to others who have not been so situated.

The pest, which seems now almost confined to the Turkish empire, is

described by the author in accordance with the researches of M. Bulard, who studied the disease in the Eastern countries, between the years 1833 and 1838. M. Grisolle thinks that weight of authority is in favour of its being endemic in the East—peculiar circumstances evidently existing there to account for its development—though M. Bulard is of opinion that it is always imported there; at the same time he believes it to be contagious, capable of being transmitted by fomites, thus calling for the strict administration of quarantine regulations by other countries having intercourse with the Turkish empire.

Commencing the account of the eruptive fever, we find an excellent description of variola and its kindred eruptions, vaccinia and varicella. The works of the most recent French authors on vaccinia, MM. Husson and Bousquet, furnish the materials for the views taken on many points by M. Grisolle. Among others, he believes with M. Bousquet, that the infection of vaccinia takes place during the period of incubation, the development of the vesicle being merely the consequence and evidence of infection; thus admitting that the vaccinia is already preservative by the third day at latest, and that consequently, good matter exists in the vesicle as soon as this appears, though from the minuteness of the quantity it is better to wait until the 6th or 9th day, before taking it from the vesicle. M. G. also prefers to use new virus taken within a short period, from the cow; as the vesicles are finer than those obtained from the insertion of some of the old virus. He does not consider that the necessity for revaccination is as yet proved; it being well ascertained that some constitutions are liable to a repetition of either affection, variola or vaccinia, when exposed to its contagion.

Rubeola is well described with all its peculiarities, as are also scarlatina, and the sweating sickness, *suette miliaire*, which M. Grisolle thinks should be placed in this class of diseases. As to the highly vaunted prophylactic powers of belladonna against scarlatina, he believes they are very doubtful, certainly far from being established. The valuable researches of MM. Andral and Gavarret in relation to the blood, are called in to sustain the classification of these diseases among the fevers; these observers having proved that the blood in them presents the same alterations as in the other pyrexiae, viz., that there is never any augmentation of the fibrin, which most generally remains in normal quantity, though sometimes it is sensibly diminished, especially at the period of the eruption, while the globules either remain in normal quantity or increase in number: and that the blood presents no buffy coat when drawn unless there is some inflammatory complication, or in some cases of very confluent small-pox, when it may be found, but soft and gelatinous in its consistence.

Intermittents are the third kind of fevers noticed by our author. They are either benign, pernicious or anomalous, and are characterized by no essential anatomical lesion, as a point of departure; though they are extremely commonly attended by a concomitant alteration of the spleen, viz., its enlargement, which, in the benign form is an actual hypertrophy, with induration of its tissue, especially when the disease is prolonged, but in the pernicious form is at first a simple engorgement, the organ finally breaking down into a soft pulp as in grave fevers. This augmentation of volume is more frequent in the tertians and quartans than in the quotidiants, which last, are, however, more common than the tertians, says M. G., from an analysis of some 160,000 cases observed in different countries, in the proportion of 9 to 1, while the quartans do not occur more than 2 or 3 times in

1000 cases. He says that "relapses are more frequent after attacks cured by febrifuges, than after those which have ceased spontaneously," still he considers it irrational to defer the administration of these remedies, and advises that a cure should be sought for as soon as possible. As to the antagonism supposed by Boudin and others, to exist between intermittent fevers and phthisis, M.G. considers it as being not only without foundation, but expressly disproved by the public documents published in England relative to the health of her troops in her different colonies.

M. Grisolle thinks that remittents differ from intermittents only in degree, and that the pseudo-continued fever described by M. Maillot as existing in Algeria, is nothing more than a modification of the same affection, assuming sometimes the intermittent, sometimes the remittent form, and not deserving a separate description. As to the pathology of remittent fever, M. Grisolle has adopted the opinions given out by Dr. Stewardson in this journal in 1841-2, opinions which are corroborated, says M. G., by the researches of Mr. Twinning upon the Ganges, though these are wanting in precision. He remarks that these papers of Dr. S. contain the only precise pathological notions ever yet put forth upon the subject, though, as Dr. Stewardson admits, some facts are requisite before the universality of the appearances observed in such cases is fairly established. We may here observe, that in the number of this journal, for Jan. last, there is a paper from Dr. Swett, of New York, containing the results of his observations in the New York Hospital, which correspond entirely with the experience of Dr. Stewardson. M. Grisolle thinks that Dr. Stewardson is mistaken in considering the morbid appearances in the stomach as evidences of inflammation, although he would not positively assert that they are endemic, a degree of modesty which is certainly very becoming, considering that he himself never saw a single case of remittent fever.

With a brief notice of hectic fever, the author closes his account of the first class of diseases, which are in the main, very happily, though in general, summarily discussed. It must be recollected, however, that his accounts of these affections are the results of his examinations among French authors, and that for this reason all notice of English authorities, with the exceptions we have noted, is omitted, which is more to be regretted, because on many of these subjects, the latter are both more full and better informed than the French; though, perhaps, on pathology, or rather the morbid appearances presented in some of these diseases, there is but little satisfactory anywhere to be found.

A change (*vice*) of the proportions of the blood is the essential character of the second class of diseases. This change may consist either in the whole quantity of the blood, or in a want of proportion in the globules which are sometimes in excess, sometimes below the physiological standard. It may also be either general or local, according as it affects the whole mass of the blood, or only that portion of it which flows towards such or such an organ. Among the consequences of the former, are plethora and anemia. Among the latter, are those sanguine congestions and local anemias which are caused by the blood being conveyed in too great or too small quantity to the capillaries of an organ or part of an organ, without any appreciable change in the constituents of the liquid, thus differing from the general affection in which, whether plethora or anemia, there is at the same time, alteration in the quantity and in the constituent parts.

The state of plethora in which the blood is assumed to be in excess, though, as Andral says, there is no proof of it, may be either a physiological or a morbid condition; the only difference being that there is a larger number

of globules with less water than usual, the fibrin being still in normal amount. M. G. agrees with M. Andral, that this condition does not act as a predisposing cause to the contraction of inflammatory diseases. Sanguine congestion, or the accumulation of blood in greater than the normal quantity in some part of the body, may be either active or passive, and may sometimes disappear so rapidly in the last moments of life, as to render the fact of its existence very doubtful, even though there was the fullest evidence of its previous presence. After some excellent general remarks, M. Grisolle passes to the consideration of congestions in particular organs, beginning with the brain. He distinguishes two forms of it only, a benign and a severe form. When it kills rapidly, it is impossible during life, to distinguish it from apoplexy; but in the other variety, the rapidity with which even the most serious symptoms, as paralysis, delirium, &c., disappear, is a distinctive character of this affection and one of great value. As regards the application of leeches for the relief of this affection, M. Grisolle thinks that the prejudices against such a remedy arise from the fact that an insufficient number is generally made use of; and recommends that in cases where the congestion is consequent upon the pressure of a tumour, for instance, preventing the return of blood to the heart, the flow of blood should be kept up for 12 or 24 hours by means of successive applications of two, four, or six leeches. Our author is of opinion, that in the present state of science, there is no group of symptoms, which may be regarded as the effects of a congestion of the spinal marrow, there being an entire absence of satisfactory *post-mortem* examinations, and the existence of such an affection having been admitted solely by analogy.

The facts upon which the chapter on pulmonary congestion, whether active or passive, is founded, are derived from M. Grisolle's own experience. It may occur so suddenly and extensively as to cause instantaneous death, a statement which is corroborated fully by MM. Devergie and Lebert, the former stating that of forty cases of sudden death which he had observed, twenty-four were consequent upon pulmonary congestion either alone or with cerebral congestion. Extremes of temperature and especially the great heat of dog-days are causes of this disease. A similar remark corroborated by cases, has been made by a writer in the New York Lancet; viz., that instances of sudden death from pulmonary congestion are frequently met with during extremely hot weather in New Orleans.

As regards the passive form, M. Grisolle says that it is wrong to consider the engorgements of the lungs met with in *post-mortem* examinations after chronic disease, as being always cadaveric; he contends, and in this opinion M. Piorry agrees with him, that they commence in enfeebled subjects at a period somewhat remote from death, a fact which may be verified by percussion. These congestions, except in such cases, generally terminate in resolution; sometimes, however, the blood acts as a foreign body and causes inflammation,—this being one of the most frequent causes of the pneumonia so often observed in the course of very many cases of acute and chronic disease.

"It is impossible," says M. G., "to detect this condition when existing in the abdominal organs, except in the liver, spleen and uterus. Congestion of the liver, in most cases, depends on cardiac disease, which causes retardation of the course of the blood; it may, however, be primitive." He agrees with M. Andral, that these congestions may last for months or years, causing gradual wasting away, and thus giving rise to the suspicion of the existence of organic disease of the liver; from which, as hypertrophy, for

example, it would be difficult to distinguish it unless the fact of its rapid and sudden occurrence could be satisfactorily ascertained.

Congestions of the spleen must be frequent, as in its function it appears to be a sort of diverticulum for the blood; they, however, cause no trouble under such circumstances. When truly morbid, they are never primitive, so far as we know, occurring in the course of fevers and of severe diseases where the blood has lost a portion of its fibrin and tends to stagnate. Uterine congestions are briefly and summarily treated of in the concluding chapter of this first kind of diseases due to the *vice* of proportion of the blood. In the second kind, the blood is in less than its usual quantity, or rather there is, according to MM. Andral and Gavarret, a diminution of the globules, the other principles of the blood remaining unchanged, except when the anemic condition is rapidly developed from phlebotomy or hemorrhage, when the fibrin is also diminished. M. Grisolle is of opinion that chlorosis has been very improperly considered a distinct disease from anemia; authors distinguishing in the former the derangements of menstrual function as showing a difference. But, in truth, no such distinction exists, both exhibiting the same symptoms and march, requiring the same treatment, and being due to the same cause, *impoverishment of the blood*; a cause which is fully sufficient to account for all the functional lesions which have been brought forward and remarked upon, as constituting chlorosis, in contradistinction to anemia. As respects the advantage of marriage recommended in these cases, M. G. thus speaks:

"Marriage can only be advantageous when the cause of the chlorosis can be traced to crossing in love, and when the young girl is to be united to the object of her affections. It is clear that in this case, the satisfaction of the heart is far more effectual in restoring the health, than the sexual congress, which often acts rather as a debilitant than an excitant."—I. 192.

The third class of diseases noticed by the author are the inflammations. Attention is first directed to the subject of inflammation in general, of which the various symptoms, morbid secretions, &c., are passed rapidly in review. The researches of M. Dubois, of Amiens, relative to the microscopic appearances in an inflamed part, are adopted by M. Grisolle, who thus states them:

"In commencing inflammation, sometimes there is only acceleration of the capillary currents; afterwards in these, and at the beginning of all other cases, these currents are more or less manifestly retarded, and at a later period there is a more or less marked remission in the circulatory movement; the globules advancing by jerks, isochronous with the movement of the heart and then stopping, to advance again, until finally they entirely cease to move, after having exhibited less and less marked oscillatory movements."

The results obtained by MM. Andral and Gavarret from their experiments, as to the condition of the blood in inflammation, are adopted fully, viz., the fibrine is constantly and spontaneously augmented, the globular element exhibiting no change, although it may diminish, after debilitating treatment, while the albumen may increase in quantity. The first, however, is the only constant change, and is manifested in the formation of the buffy coat, which is alone met with in inflammation, in anemia, and in pregnancy. Its absence does not, however, indicate the absence of inflammation.

As in his work on pneumonia, M. Grisolle, while acknowledging that cold is the most common cause of inflammation, contends that its importance as a cause, has been much exaggerated, when resorted to, as it has

been, to account for the development of all inflammations of the pulmonary apparatus, for instance. As to the possibility of arresting inflammation, cutting it short, he, with Louis and Chomel, deny it entirely. It runs, say they, a certain course, which may, perhaps, be a little abridged by appropriate treatment, but cannot be arrested; an opinion confirmed by the observations of M. Andral, who shows that notwithstanding repeated bleedings, no matter how copious they are or how near to each other, the fibrin goes on increasing in quantity.

These preliminary considerations being concluded, M. Grisolle next enters upon the description of inflammation as affecting particular parts, beginning with the digestive apparatus. Stomatitis is first in order. This, in its different forms, and glossitis are carefully, though necessarily briefly, described. The same may be said of his account of angina, which is examined under the different forms of guttural and pharyngeal, tonsillary and pseudo-membranous.

Next in order, after a short chapter on œsophagitis, comes a disease, gastritis, which has made a great noise in the world, but is acknowledged to be now one of rare occurrence, and consequently most difficult to describe. M. Grisolle says, after denying the authority of the writers of the Broussaian school, who often saw gastritis when it did not exist,

"I repeat it, that in the actual state of science, inflammation of the stomach, as a spontaneous affection, is excessively rare, and no one has as yet been able to trace a satisfactory history of it."—I. 248.

Of softening of the stomach, M. G. says, that the red softening and those colourless ones surrounded by a bright injection, are the only forms which can be reasonably referred to inflammation; while the pulpy, gelatiniform and absolutely colourless softenings which arise under a great number of circumstances, constitute a distinct and peculiar affection.

"Finally," says M. G. "there is every reason to believe that the softenings of the gastro-intestinal mucous membrane, which, according to the admirable researches of M. Louis, occur so frequently in the course of all febrile attacks, when somewhat prolonged, have not, as their immediate cause, an inflammatory action."—I. 249.

Enteritis and colitis may be either acute or chronic, mild or severe, and dysenteric. As to the peculiar symptoms characteristic of duodenitis, as described by authors, consisting in pain at the umbilicus, felt some two or three hours after eating, the more frequent occurrence of bilious stools, in consequence of the irritation of the biliary ducts, or of jaundice from the obliteration of these ducts, M. Grisolle thinks they are entirely gratuitous, and except in rare instances, unfounded in facts. Inflammation of the colon and rectum, however, have positive and peculiar symptoms, though this disease rarely exists alone, the end of the small intestines being almost always simultaneously attacked.

The difficulty of diagnostinating severe enteritis in children between two and five years from typhoid fever, which has been so elaborately and satisfactorily shown by MM. Rilliet and Barthez in their admirable treatise on the diseases of children, is here adverted to by the author. It should be recollected, however, as must always be borne in mind in reading the accounts of these authors, that the children who are subjects of these remarks, were the inmates of a hospital, and consequently subjected to all the unhealthy influences of such a place of abode; that they are depraved in constitution, and belong to the most wretched classes of society.

Ulcerations in the intestines in chronic entero-colitis are exceedingly rare, says M. G., unless they are the result of the breaking down of tubercles, so that when we find entero-colitis attended with rapid emaciation by no means proportionate to the diarrhoea, and especially, when accompanied by regular febrile exacerbations, returning every evening, in adults, we should suspect the existence of intestinal tubercles.

Dysentery is next considered. Without denying its contagiousness, which he deems it impossible to do in the face of the authorities who have asserted its transmission in this way, M. Grisolle believes that this is confined to the epidemic form, or when it breaks out among persons living in extreme wretchedness and filth, and in crowded apartments; an opinion corroborated by the general agreement among authors, that it is by means of the emanations from the alvine evacuations, chiefly, or even solely, that it thus spreads. As to the treatment, M. G. contents himself with simply prescribing abstinence, mucilaginous drinks, baths, enemata, emollient cataplasms and opiates, when the case is not febrile and mild; where evidences of strong reaction occurs, he advises general and local bleeding. Evacuants, he says, were prescribed during the last century; but though successfully used empirically in some epidemics, he does not think that, as a general rule, they can be useful. Among these he places calomel and ipecac. in small doses. It does seem strange that the French physicians have such a dread of that *terrible medicine*, calomel, when it is so successfully used in England, Germany and this country, and particularly in the disease under consideration, combined with ipecac. and opium. M. Grisolle does not even hint at their usefulness in chronic dysentery. To be sure, the severe forms of this disease met with in tropical climates and in this country, are very rarely seen in Paris; nor have the physicians of that capital opportunities of treating the severe chronic form of it, met with among the seamen of England and the United States during long East India voyages.

M. Grisolle next studies the inflammations of the appendages to the digestive tubes. Parotitis is briefly noticed. Hepatitis is described with much care after the most recent publications of the French and English writers. M. G. agrees with M. Louis in thinking that the only sign which can by itself be considered characteristic of hepatitis, is the presence of pus in the organ, which pus is rarely infiltrated through it, but is collected in one or more abscesses, either on the surface or internally, and is almost always white, phlegmonous, and more rarely green or reddish, being in this case mingled with the detritus of the softened organ. The mode of opening of these abscesses into the digestive tube, into the chest, &c., and the consequences resulting from this cause, are carefully described. Indeed, this is one of the most interesting and well-digested chapters in the work; a work, it may be here said in passing, in which the vast amount of materials at the author's disposal have been most admirably summed up and condensed. M. Grisolle has no fear in this disease of mercurial preparations, after proper depletory measures have been resorted to.

Of the chronic form of hepatitis, says M. G., the same means of accurate description are wanting. As in the acute form, the presence of pus can alone warrant the belief in this disease; in this case it is always encysted, the membrane of the cyst being tough, and surrounded by indurated tissue. Of cholecystitis, which is the next disease treated of, nothing more than a mere sketch is presented, there being no certain means of diagnosis. The same may be said of pancreatitis, which rarely occurs,

and then only consecutively. Splenitis is apparently a rare affection, little respecting it, either symptomatically or anatomically, being known. M. Grisolle thinks that the only signs of its existence, anatomically considered, are pus and the infiltration of its tissue with a fibro-albuminous matter, circumstances which are very unusual, though change in the colour, consistence and volume of this organ are often met with in other diseases, independently of its inflammation. It is rarely a primitive affection, being generally the result of a traumatic cause, as a blow upon the left hypochondrium, and is characterized by constant pain, and the rapid occurrence of evidences of its increased volume, discoverable on percussion.

Of the inflammations of the respiratory organs, laryngitis first receives attention; it occurs under a variety of forms, viz., simple or mucous, stridulous or false croup, pseudo-membranous or true croup, sub-mucous and chronic. In this notice of laryngitis, we are presented with an admirable summary of the disease, containing all that is new or important in reference to its various forms. As to *œdema glottidis*, M. Grisolle agrees with MM. Chomel and Blache, that it is impossible to arrive at any satisfactory conclusion as to the nature of the attack, by carrying the finger into the mouth so as to touch the glottis. The spasmotic contraction of the throat, and the efforts to vomit provoked by such manipulation, entirely prevent the proper examination. The occurrence of *œdema glottidis*, which is a very grave affection,—only nine cases out of thirty-nine, collected by M. Valleix, having recovered,—can only be determined by a concurrence of symptoms; “as a feeling of obstruction at the upper part of the larynx, accompanied with hoarseness, a whistling inspiration, and soon with fits of suffocation, which cease and recur ordinarily at short intervals.” M. Valleix has recently confirmed the opinion of Bayle, that *œdema glottidis* very rarely occurs in a state of perfect health, but most generally in the course of, or during convalescence from some febrile disease.

Chronic laryngitis is often met with, though many alterations have been pointed out as indicative of this disease, which are not properly so; among others ulcerations. M. Grisolle says,

“A more attentive observation has at length placed beyond question the fact that in almost every case, if not in all, ulcerations of the larynx are symptomatic. Thus in the acute state they are only observed in the course of glanders and typhoid fever, more rarely in variola, or after the use of tartar emetic in large doses; in the chronic state they are connected almost always with pulmonary tubercles; finally, in some very rare cases they are consecutive to syphilitic infection. Does it follow from this that ulcerations of the larynx can never be primitive? Though far from denying the possibility, I believe that this must be excessively rare; for in the numerous autopsies I have made during the last twelve years, I have never yet met with an example of primitive ulcerations, nor have I been able, among the writings which I have examined, to find a single well-authenticated instance of them. I will go so far as to say, that the seven observations which M. Trousseau has collected as examples of chronic laryngitis with essential ulcerations, are not conclusive; for although no pulmonary tubercles existed, it is not satisfactorily shown that these ulcerations were not the result of venereal infection. I repeat, therefore, that I do not absolutely deny the possibility of the occurrence of primitive idiopathic ulcerations; I merely say that they are rare, so rare, that when they are met with in the dead body, or are suspected in the living, the action of some of the preceding general causes must be suspected.”—I. 314.

In the treatment of chronic laryngitis, great importance is given to the use of external irritation, and particularly, as recommended by MM. Trou-

seau and Belloc, the use of topical astringents and caustics, as the nitrate of silver, in strong solution, applied directly to the part.

Tracheitis is very rarely a simple disease, the inflammation usually extending either to the larynx or bronchi. Bronchitis is divided into acute and chronic forms; the first being either ordinary, capillary, or pseudo-membranous. The capillary form, corresponding with the suffocative catarrh of authors, has been well described only in modern times, especially by M. Fauvel, of whose admirable paper on this disease, published in the 2d vol. of the *Mém. de la Soc. d'Observation*, of Paris, an analysis was presented in the number of this Journal for July, 1844, p. 173.

After a brief account of the *grippe* or influenza, the author takes up the important subject of pneumonia, and presents the reader with an analysis of his now more extended work upon this disease at the different periods of life. The readers of this journal have already been placed in possession of the author's views upon pneumonia by means of an extended review of his work, published in the July number for 1843, p. 107, so that it is unnecessary to dwell upon the subject. There is one point, however, which we will not pass over, and that is, that the author has entirely omitted all allusion to the fact that mercurials are advantageously employed in this disease; an omission the more remarkable, as in his more extended work he spoke of their employment with alleged benefit. Indeed, so general and so useful, in many forms of pneumonia, which will not admit of the use of venesection or of tartar emetic, is the employment of calomel, or blue pill and opium, in this country and England, that it would appear incredible that no notice of the fact should be contained in a work of the character of that which is under consideration.

M. Hirtz, of Strasburg, we are told by the author, directs attention to the fact that when effusion first takes place in pleuritis,—the next subject of inquiry,—the liquid is extended in a layer over a large surface, causing an extensive *souffle* and dullness; and that then the liquid suddenly accumulates at the base of the thorax, abandoning the upper parts; the air tubes becoming then strongly compressed and flattened, no morbid sound is heard there, while the vesicular murmur and sonorousness reappear above, though, as M. Grisolle says, they are feebler there than on the opposite side; M. Skoda, of Vienna, supported by M. Fauvel, on the other hand, is of opinion that though the vesicular murmur is feebler, there is actually an exaggeration of sound on percussion. M. Grisolle says that it is a mistake to assert that *œgophony* is pathognomonic of pleuritis; for, as he has shown in his work on pneumonia, it is sometimes met with in simple pulmonary indurations in certain individuals, and especially old women, whose voice is naturally shrill and trembling. To be of diagnostic value, it must coincide with dullness, must be very decided and susceptible of displacement and modification in consequence of change in the position of the patient.

Chronic pleurisy is always serious because of its frequent coincidence with tubercles,

"Pleurisy differing from acute pneumonia in this; that while pneumonia rarely stimulates the production and march of tubercles, such is not the case with pleurisy; for though this is often cured under these circumstances, it does not prevent, in proportion as the effused liquid is absorbed and the chest becomes narrow, the phthisis from generally making incessant and, at times, rapid progress."—I. 377.

Pericarditis may be suspected to exist whenever fever and dyspnœa are present without any apparent cause; a suspicion which may be made a

certainty by means of the usual physical examination of the chest. After combating it by antiphlogistics, and digitalis, says M. Grisolle,

"And there are evidences of effusion, the precordial region should be covered with a large blister, and suppuration from the blistered surface should be kept up. This is almost the sole treatment to be employed against chronic pericarditis; except that in cases where it is rebellious, a more energetic exutory, as a cautery, a moxa or even a seton may be substituted for it."—I. 384.

Endocarditis, whose importance and frequency have been much exaggerated by M. Bouillaud who first accurately described it, is rarely primitive, occurring generally in the course of some other acute disease, especially acute rheumatism. Its diagnosis is often extremely difficult. M. G. says,

"When an individual, who presents no sign of cardiac affection, is suddenly attacked with oppression and palpitation; when the heart is all at once augmented in volume and gives to the ear a sharp direct impulsion, whilst the sounds are masked or replaced by abnormal ones, endocarditis may with certainty be diagnosed; under all these circumstances we must remain in doubt."—I. 388.

Carditis is very rare and presents no symptoms by which it may be suspected or recognized during life; nor is there any thing to characterize it after death but the presence of pus, which is rarely infiltrated, but is collected in abscesses.

Arteritis, thanks to modern investigation, is better understood. Redness is an insufficient sign of inflammation, and must coincide with some change in the tissues, as thickening, friability of the internal membrane, which is at the same time wrinkled, villous, rough, and more or less covered with fibrinous clots which adhere to it; coagulation being one of the most common though not constant accompaniments of inflammation. The most certain indication of inflammation is the presence of an albuminous pseudomembranous exudation sufficient at times to obstruct entirely the calibre of the artery. M. Bizot thinks that the cartilaginous spots in the arteries, looked upon as evidence of chronic inflammation, are the remains of the albuminous exudation of the acute stage, which, not being absorbed, organizes, hardens, and acquires a cartilaginous consistence, the internal membrane disappearing and leaving this cartilaginous matter immediately upon the middle coat. The bony production is said to be merely the consequence of some perversion of nutrition due to old age and never to be the result of inflammation.

As with arteritis, mere redness is insufficient to characterize phlebitis, some lesion of nutrition being requisite to establish its existence. The vessel must also have a certain calibre, hence the impossibility of ascertaining the presence of capillary phlebitis. M. Grisolle, however, remarks that the inflammation of the capillary veins of the bony system may be suspected from a symptom which generally accompanies it, viz., purulent infiltration of the medullary membrane, especially marked in the spongy tissue of the bones.

"I have met with this lesion," says he, "in all the numerous patients whom I have seen die from inflammation of the veins after amputation of the limbs."—I. 397.

Uterine phlebitis, as described by Dance, and phlebitis of the cerebral sinus, after Tonnélé, are the subjects of special remarks, the author then proceeding to the examination of the subject of metastatic abscesses. M. Grisolle says there is no doubt that the pus may mingle with and change the blood, (its globules being discoverable there,) the blood becoming more diffused and

like currant-jelly, while the bodies putrefy more rapidly. This alteration, which is always consecutive, causes the serious accidents of the second stage of phlebitis, and accounts for the morbid purulent deposits, which take place in the most vascular parts of the most vascular organs. Dance thinks that the vitiated blood may cause special disseminated inflammation attended with rapid suppuration, or, as Cruveilhier says, the non-eliminated pus may act as a foreign body, stopping in the capillaries, inflaming them and causing engorgement and abscess.

The diagnosis of superficial phlebitis is not difficult, but when it affects a deep-seated vessel, the only means of certainly ascertaining its presence are the symptoms due to the existence of general purulent infection.

"Thus, when in the course of a continued febrile movement which has lasted 7, 8, or 10 days, we observe irregular chills, delirium, prostration, jaundice, we should fear a purulent infection of the blood—fears still better founded, when articular pains are added and rendered certainty, when multiplied abscesses are developed in different parts of the body."—I. 402. "When the symptoms of infection make their appearance, the patient is destined to almost certain death; all means hitherto employed to prevent it having proved unavailing."—404.

Inflammation of the lymphatic system, vessels, and glands, next occupies the author's attention. We must, however, pass on to the consideration of the important series of diseases embraced under the head of inflammation of the nervous system, commencing with cerebral meningitis. This comprises the simultaneous inflammation of the arachnoid and pia mater, it being doubtful, says M. G., notwithstanding Abercrombie's inconclusive facts, whether or not the dura mater can be primitively inflamed. That it may be consequent to disease of the cranium, is placed without doubt, though, even in this case no symptoms absolutely indicative of it, have been observed.

Meningitis may occur under two principal circumstances: 1st, when there are tuberculous granulations in the sub-arachnoid cellular tissue: 2d, where nothing but the usual phenomena of serous inflammation are present. The latter form alone occupies attention in this chapter, though the two were, until a very recent period, confounded together. It is rarely general, and more usually occupies the convexity in adults, and the base in children. The symptoms, no one of which taken alone, is pathognomonic of this disease, are headache, delirium, coma, convulsions, strabismus, febrile excitement, &c., due rather to the impression the inflammation causes upon the brain, than to the inflammation itself.

"It is undeniable," however, says M. G., "that delirium is more rarely absent in the meningitis of the convexity of the hemispheres, than in that of the base; whilst the coma occurs more frequently, at least as a primitive symptom in that of the base, or still more decidedly, when effusion into the ventricles takes place."—I. 413.

This disease either terminates by complete and rapid (though sometimes slow) restoration to health, or by death, very rarely becoming chronic.

Rachidian or cerebro-spinal meningitis is only known from modern investigations, MM. Ollivier d'Angers, Calmeil, and Tourdes, of Strasburg, being the best writers upon it. The evidences of this inflammation are most frequently observed in the cervical portion of the spinal column, and circumscribed there, especially when caused by disease of the vertebra. In this latter case alone does it become chronic, causing adherence between the laminae of the arachnoid. M. Tourdes has observed cases in which it killed in a few hours, without giving time for the development of the cha-

racteristic lesions. In general, however, it is preceded by febrile excitement and violent pain in the affected region, irradiating towards the limbs and attended with spasmody contraction of the muscles of the back, &c., which may be permanent or remittent, and extreme sensibility of the skin and symptoms of cerebral meningitis. Death, which is the most usual termination, comes on with epileptiform convulsions or from asphyxia; health very slowly returns when recovery takes place. Sometimes the result of cold, or of direct violence, at others having reigned epidemically in barracks, it is in the great majority of cases spontaneous. Antiphlogistics and mercurials with opium, which appear to have been occasionally useful, are the proper means of combating it.

Encephalitis, comprising inflammation of the cerebrum, cerebellum and protuberance, and myelitis, including that of the spinal marrow and medulla oblongata, are the subjects of the next chapter, and are discussed in a very clear and interesting manner. In a work, necessarily so condensed, there can nothing more be given than a summary of facts and opinions, without the possibility of citing authorities and approving or combating their views; the author, therefore, as in all other cases, merely alludes generally, at the commencement of his chapter, to the best authorities on the subject treated of, and acknowledges in general terms the use he has made of their labours; making use of established facts in science, without feeling the necessity of naming his authority, except where the fact is of recent discovery—his work being confessedly a compilation.

Coryza and otitis are next briefly studied, the author passing from them to the consideration of the inflammation of the secretory and excretory urinary organs, beginning with that of the kidneys. Simple acute and chronic nephritis, pyelitis and albuminous nephritis are the different forms which are passed in review, M. Rayer's great work affording most of the matter upon which the present accounts are founded. With regard to albuminous nephritis, which is carefully and admirably described in the condensed chapter before us, M. Grisolle is of opinion that cases of complete radical cure are *extraordinarily rare*, death being the almost constant termination of the disease, though temporary amelioration may take place. As the name given to this affection indicates, M. Grisolle has adopted entirely the opinion of M. Rayer as to its inflammatory character, making it a form of nephritis; he admits that it differs from other inflammations, in attacking both kidneys at the same time and in never going to suppuration; and he believes that the alteration of the blood in it is consecutive to the disease and not its cause.

Under the title cystitis, M. G. comprehends all inflammations of the bladder, reserving the term vesical catarrh to designate a peculiar, non-inflammatory, morbid condition either consequent upon previous inflammation or not, and characterized by exaggeration or perversion of the natural mucous secretion.

Of the inflammations of the genital organs, we find in this place only acute and chronic metritis, ovaritis and inflammation of the fallopian tubes and broad ligaments; the description of those of the vagina, urethra and glans penis being deferred until the author enters upon his account of the venereal disease, not that he means it to be understood that these inflammations are always the result of venereal infection, but because there are only shades of difference in the symptoms without any marked distinction.

Metritis is either acute or chronic, the latter being attended with engorgement and induration or with ulceration. M. Grisolle does not believe

that this chronic form ever degenerates into cancer, unless the woman is predisposed to it, though the disease may run on for years; the error having arisen from mistaking the first stage of cancerous hardening for simple inflammatory induration. The diagnosis is difficult, though it is not impossible. M. G. says:—

“The two diseases, however, may be distinguished from each other by bearing in mind that scirrhus is most generally limited to the neck, which is usually better circumscribed than in inflammatory induration; that the hardness of the engorgement, and the weight of the tumour are also much more considerable, and that pressure develops in it less pain. Finally the irregularities and knottiness of the scirrhouus tumour, its dull white colour, and the hemorrhages which accompany it, will be so many characters which will serve to distinguish it from simple chronic engorgements.”

As to ovaritis, M. G. says, that notwithstanding contrary assertions, he believes it to be quite common, independently of the puerperal condition and of pregnancy. The opinion that it may arise from blenorragia, like inflammation of the testicle in man, he considers to be sustained rather by analogy than proof.

Peritonitis may be either simple, acute and primitive, or chronic, or puerperal. Of the latter disease, his description is based entirely upon French authorities, corrected by his own observations. While admitting the epidemic constitution which extends its influence over women confined in their own houses as well as those in hospitals, M. Grisolle thinks there is neither demonstration nor probability of its contagious nature which has been maintained in England and in some instances in this country. He believes that no uniform treatment can be adopted in this disease, the peculiarity of the epidemic influencing this to a great extent. Contrary to the practice which has been so warmly sustained by some of the English and of our own writers, M. G., while asserting its almost universal usefulness, recommends bleeding being resorted to with great precaution and with the greatest reserve, even in cases where the disease announces itself with marked inflammatory characters; for a single, even moderate bleeding, says he, is often followed with prostration. He therefore recommends a small bleeding from 7 to 10 ounces, to be repeated if well borne, and to be assisted by the use of 20 to 30 leeches to the abdomen—when the pulse and strength admit it—followed by cataplasms and laxatives. When these means are inadmissible, recourse must be had to mercurials in repeated doses, until their constitutional effect is obtained.

Consecutive peritonitis, from intestinal perforation, for instance, and chronic peritonitis, which, like M. Louis, M. Grisolle has never met with unconnected with tubercles in the peritoneum, save in one case where they were found in the lungs, are the subjects of the next succeeding chapters.

Inflammation of the cellular tissue comprehends here the phlegmonous abscesses of the splanchnic cavities, the chest and the abdomen. Under this head the author sketches descriptions of phlegmonous abscesses in the mediastinum, around the kidneys, in the fossa iliaca, in the pelvic cavity and in the cellular tissue around the parotid. Inflammation of the muscular tissue, which is extremely rare and has even been denied to occur, is studied in the only two muscles in which it has been certainly recognized, viz., in the heart (see the chapter on carditis), and in the psoas muscle, where it has commonly received the name of psoas abscess, but is here called psoitis.

The inflammations of the skin next pass in review, under the general

heads of exanthemata, vesicles, bullæ and pustules. To the first of these belong erythema, roseola, erysipelas, pellagra and, perhaps, urticaria.

M. Grisolle directs attention to a symptom in erysipelas, which he says occurs in two-thirds of the cases as a premonitory, viz. :

"A painful engorgement of the lymphatic glands which receive the vessels coming from the part about to be attacked with erysipelas, although the skin presents as yet no appreciable modification of its colour, its thickness, its temperature or its sensibility. This engorgement of the glands, to which M. Chomel has particularly called attention, precedes the development of the erysipelas one, two or three days. We have even seen it precede the redness seven, eight or nine days. The number of the glands affected, their sensibility and swelling are generally in proportion to the extent and gravity the erysipelas will present; though to this there are numerous exceptions."—I. 534.

M. G. has never seen the glands suppurate, even when much swelled and very painful. He believes with M. Chomel, that erysipelas has never arisen simply from an external cause, or if this concurs in its production, its action is only secondary, being dependent upon some unknown internal condition, though it may hasten its development, or fix its seat. He thinks that all topical treatment, either with a view to limit the disease or to moderate the inflammation of the skin, should be abstained from, unless the tension and pain are very great, when a prolonged bath or a warm cataplasm may be resorted to. As to the application of a blister, which was adopted by Dupuytren, among others, to restrain or limit the disease, M. G. says, "it has no power either to restrict the erysipelas or to abridge its duration," founding his opinion upon the very facts he collected at the *clinique* of M. Dupuytren. He admits, however, that no harm was ever observed to follow its application for this purpose. Mercurial ointment is not any more advantageous, it being now ascertained, says the author, that most of the cures attributed to it, were solely due to the natural march of the disease. Indeed, considering all its circumstances, M. Grisolle is of opinion that the cutaneous inflammation does not constitute the disease, though he cannot agree with Rust that erysipelas is an exanthematic fever.

Herpes and eczema are the only vesicular diseases upon which the author treats in this place, referring for an account of psora to the diseases produced by parasitic animals, and of hydrargyria to mercurial diseases. Next come the bullar eruptions, pemphigus and rupia, and then the pustular, of which M. G. here speaks only of acne, mentagra, impetigo, ectyma and favus, deferring his account of syphilitic pustules until he comes to speak of the syphilitic virus.

We have thus followed the author through the important class of the phlegmasiæ, and have now to consider with him the fourth class of diseases, viz., those due to morbid secretions, which are either the increase of a natural fluid, constituting a flux or collection, according as it makes its way outwardly or not, or the accidental secretion of an unusual fluid. He is induced to admit this class of diseases, because in the present state of our knowledge we cannot penetrate the nature of the disease, and cannot, therefore, do better than characterize it by its principal phenomenon, which may explain most of the accidents observed, and may become the source of the principal indication. With M. Chomel, he divides the morbid secretions according to the nature of the exhaled fluids into 1st, hemorrhages; 2d, serous secretions; 3d, mucous secretions; 4th, secretions of liquids peculiar to certain organs, as urine, sperm, milk, &c.; and 5th, pneumatoses or the secretions of elastic fluids.

Some good general remarks introduce the subject of hemorrhages. M. Grisolle agrees with M. Andral, that the defibrination of the blood becomes in a great number of cases the cause or the concomitant lesion of many sanguine discharges of a passive character, though not of all; thus, it is in those diseases which exhibit the destruction of fibrin that the greatest number of passive hemorrhages occur; an opposite state in which the blood is rich in globules, is also a cause of hemorrhage, but always of an active character, though it would be a great mistake to suppose that all active hemorrhages are due to an augmentation of globules. As to the treatment of severe hemorrhage, threatening death from want of sufficient blood to sustain life, M. Grisolle recommends having recourse to transfusion, which, while it renders the case no worse, gives a chance of life, which the experiments of Blundell and Brown warrant us in affording the patient, and, indeed, would seem imperatively to require us not to withhold.

An account of epistaxis is followed by a chapter on hemoptysis, which, though it cannot truly be said never to be essential, is in almost every case, at least, when at all abundant, symptomatic of an organic affection of the lungs or of some neighbouring organ, as the aorta or heart.

"When," says M. Grisolle, "the hemorrhage is consecutive, arising from external violence, or, what is more rare, forming the crisis of some serious disease, it is in general not dangerous; but these cases are exceptional, and we believe, that the existence of a hemoptysis should always occasion the greatest solicitude on the part of the physician; for almost all the persons who have had this accident, die sooner or later of phthisis,—not, as was long supposed, because the hemorrhage was the cause of the tubercle, but because it only occurred in consequence of the presence of these morbid productions. When the hemoptysis recurs frequently and appears to be constitutional, we should not feel completely reassured as to the cause which produces it—for we often see such individuals beget children, who all become phthisical, while they themselves die at an advanced age of some disease foreign to the lungs, and yet almost always present cretaceous tubercles in these organs. This is a fact, says M. G., which I have already several times observed."—I. 599.

We can only refer to the interesting chapters on stomorrhagia, gastrorrhagia or hematemesis, and intestinal hemorrhages, which sum up admirably these important diseases, dwelling particularly upon the differential diagnosis of the hemoptysis and hematemesis, and upon that of idiopathic and symptomatic gastrorrhagia and enterorrhagia.

Of hemorrhoids which are next described, M. Grisolle says :

"We agree with MM. Bérard and Raige-Delorme, that in the immense majority of cases, hemorrhoidal tumours are constituted at their commencement by a venous dilatation; that the anatomical changes which occur during the progress of the disease have the greatest analogy with those which the same causes develop in varicose tumours of the leg. In a word, hemorrhoids are nothing else than varices of the veins of the inferior extremity of the rectum."—I. 612.

Hematuria, urethrorrhagia and metrorrhagia or menorrhagia are the subjects of succeeding chapters, which describe admirably all the practical points relative to these hemorrhages.

The serous membranes may be the seat of hemorrhages in which the quantity of blood effused may be very large and may undergo various transformations before being absorbed. Serious as these hemorrhages are, no positive signs reveal certainly their existence, which can, in general, only be inferred from the trouble they cause by the compression of some important organ, as the brain, heart, &c.

Meningeal hemorrhage is described after the admirable papers of MM.

Baillarger, Boudet, Rilliet and Barthez and Legendre. From their researches it is shown that the effusion always takes place within the serous membrane, and may be circumscribed or diffused over both hemispheres, it being either fluid or in clot, according to the period of death; if this is postponed for four or five days, the clot is even circumscribed by a false membrane, adhering always to the parietal layer of the arachnoid. Both the clot and the serosity may finally be absorbed, leaving only a false membrane with a serous appearance. In this case the hemorrhage is the consequence of a morbid exhalation, though it may succeed a rupture of a vein or sinus or artery at the base of the brain. Whatever its source, it excites, except in young children, a pressure proportionate to its amount. The diagnosis is difficult, it being impossible when it takes place suddenly to tell it from cerebral effusion or strong congestion.

"The existence of contractions from the commencement of the disease, the irregular march of the principal symptoms, such as the diminution and then sudden aggravation of the coma and paralysis, finally the gradual augmentation of the symptoms, are the principal circumstances by which we may establish the diagnosis of the disease."—I. 636.

The prognosis is exceedingly grave, "it should be regarded as still more unfavourable than that of cerebral apoplexy itself." It kills in a few minutes, or more commonly in four or five days; though patients have lived months and some have recovered. It is frequently met with among the insane, and particularly among those labouring under paralysis and dementia; it may occur at all ages and appears to be one of the causes of asphyxia neonatorum.

Hematidrosis or bloody sweat is the subject of a short chapter, which brings the author to the consideration of interstitial hemorrhages or apoplexies, meaning thereby effusions of blood taking place suddenly and spontaneously in the substance of the organs or tissues.

Cerebral hemorrhage is first taken up; M. Grisolle remarks that in the present state of our knowledge, the opinion that special signs indicate the portion of the brain into which the effusion has taken place "is not justified by numerous facts, and that the authors who have pretended to find some such diagnostic signs have merely invoked isolated facts, or have relied upon insufficient physiological data."—I. 644. M. G. does not think that hypertrophy of the left ventricle of the heart is an active predisposing cause of cerebral hemorrhage. Much pains are taken by the author to point out the distinctive marks of this affection so as to distinguish it from congestion, softening and meningeal hemorrhage; as to the last M. Boudet states, from the examination of a large number of cases, "that effusion of blood into the arachnoid immediately causes contraction, whilst in a cerebral hemorrhage this symptom comes on only after the development of consecutive softening around the apoplectic cavity."

But few examples of hemorrhage of the spinal marrow have been published. It is liable to be confounded with its softening, and the means of diagnosis are pointed out by the author when considering this latter disease.

In all the cases of pulmonary apoplexy (more than 20) which M. Grisolle has observed, there existed different organic diseases of the heart and particularly contraction of the orifices of the left cavity. Hypertrophy of the right ventricle has been said, though wrongly, to be a cause of this affection; for in 27 cases collected by M. Louis, not one ever had pulmonary apoplexy, though in 6 of them there was also hypertrophy with dilatation of the pulmonary artery and of its principal divisions, proof that the

blood had been thrown out with a certain amount of force. Thus, pulmonary apoplexy, symptomatic of disease of the heart, is not caused actively by an unusual impulsion of the blood, but passively in consequence of an obstacle on the left side of the heart, causing stagnation in that organ and consecutively in the lungs. Other apoplexies of the abdominal viscera, of the placenta, of the muscles, and of the heart are briefly noticed, and the whole subject of hemorrhage is concluded by a chapter on purpura and by one on scurvy.

The second kind of morbid secretions or secretions of serosity, next passes in review. With Rayer and Littré, our author confines the term dropsy to serous effusion into the cellular tissue or into the serous sacs, distinguishing these from the effusions into the mucous cavities, as the stomach, uterus, &c., and from certain cysts which have been confounded with dropsy. As to the causes of dropsy, some cases are shown to arise from a change in the blood, sometimes of its quantity, more often of its quality, a defibrination and diminution of the globules, though these last do not frequently or necessarily occasion it. Dropsy seems, however, to be a necessary and almost inevitable consequence of a diminution of the albumen in the serum; a fact perfectly established by the recent investigations of M. Andral. He even doubts whether there are any other dropsies by alteration of the blood, except those resulting from the diminution of the fibrin. Anasarca is first studied by M. Grisolle. Then comes œdema, differing from the former simply in the infiltration being confined to a portion of the body, and deriving its importance from the fact that it is symptomatic of some lesion in the neighbourhood, or at a distance, which thus betrays itself. The œdema of new-born children, which is very rare in city practice, though very common among children in hospitals, and most frequently caused by cold, differs in no respect from other œdemas. The author remarks that M. Charcellay, having found on the bodies of children who died from it, the characteristic marks of Bright's disease of the kidneys, asserts that "the œdema of new-born children is very frequently the result of albuminous nephritis." The observations of MM. Valleix and Billard, however, show that this is only an exceptional cause. These latter authors consider it as an entirely distinct affection from induration of the adipose tissue, which they look upon as merely a cadaveric phenomenon; or if it does occur during life, as coming on only during the last hours and when animal heat is already almost gone. "Thus MM. Billard and Valleix have very often ascertained that children several hours dead and still in their cradle, had their limbs soft and pliable, when, upon examining them the next day in the amphitheatre, they found them hard."—p. 689. We may here remark that in the work of MM. Rilliet and Barthez on the diseases of children (vol. i. p. 739) are reported two cases of hardening of the cellular tissue, coming on under precisely the same circumstances as œdema, and resembling it except in the hardness. The cellular tissue after death was hard and resisting to the scalpel, and consisted of perfectly distinct fatty lobules, separated by partitions thick and fibrous in some parts, more delicate in others; the fatty matter itself being red and firm, and giving out, on being cut, some drops of serosity.

Phlegmasia alba dolens is next studied. M. Grisolle considers this a very rare disease, and entirely doubts the authenticity or rather relevancy of the cases said to have been observed in the male. The only constant lesion he has met with, is the œdema or infiltration of the cellular tissue, occurring under circumstances as yet not satisfactorily determined. When phlebitis is observed with it, it is merely a secondary lesion.

Acute *sur-aigüe* and chronic hydrocephalus and hydrorachis are the forms of cerebro-spinal dropsies here examined, the consideration of cerebral œdema being postponed until the author comes to the study of that form of mania called *stupidité*, of which M. Etoc considers it to be the characteristic lesion.

M. Grisolle is of opinion that in the present state of science, the only essential dropsy of the meninges or brain, which should be admitted, is that described under the names of serous apoplexy or *sur-aigüe* cerebral dropsy; meaning thereby "a disease characterized anatomically by the exhalation of a great quantity of serosity into the interior of the cranium, causing a sudden and more or less complete loss of sensibility, movement and intelligence." Notwithstanding the assertion of Abercrombie, that he has met with mortal apoplexies without cerebral lesion and extensive effusion into the cranium where no apoplectic symptoms had been observed, and that therefore the serous effusions when observed are not the cause of the accidents, M. G. considers that it is impossible to question the occurrence of cases of serous apoplexy in old people, in the debilitated, and in those suffering under anasarca, the serosity being carried, as it were by metastasis, to the brain. Cœdema of the lungs, hydrothorax, both secondary affections, occurring chiefly during the last moments of life, and hydropericardium, also a secondary disease, are each studied in separate chapters. The remarks on ascites, which is next considered, are prepared with much care, and contain all that is valuable in the present state of knowledge on the subject.

The serous secretions of the mucous membranes next claim attention. They are observed in the digestive tube and in the female genital organs. The former present two varieties, viz., Asiatic cholera and hydro-enterorrhœa, or a form of disease occasionally met with, consisting in evacuations per anum of a watery, transparent liquid without mixture of bile or mucus, and causing much weakness for some time. Asiatic cholera is placed here because of its most prominent symptom, intestinal exhalation, and of our ignorance of its intimate nature, which would enable us to give it its proper nosological position. Hydrometra, or dropsy of the womb, is the only other serous exhalation of this kind here noticed.

The third kind of morbid secretions are the mucous secretions, constituting the diseases usually called catarrhs; "which are now considered as mere accidental augmentations of the secretions of the mucous follicles, without these being actually the seat of inflammatory action."

Broncorrœa, gastrorrhœa, mucous diarrhoea, leucorrhœa and vesical catarrh are each carefully described by the author, the reader being referred to a subsequent part of the work for an account of blenorrhœa. Broncorrœa is essentially distinct from bronchitis, says M. G., 1st, in its invasion, which is sudden, almost instantaneous; 2d, in the albuminous character of the expectorated matter; 3d, from the great quantity expectorated in a short time; and 4th, in the rapid cessation of its symptoms. Emetics are the best remedies to meet the urgency of the suffocative symptoms. Leucorrhœa is constituted by a white chronic discharge from the female genital organs without any appreciable lesion of those organs, and should be said to exist only when the discharge is sufficient to inconvenience the woman. Science, says M. G., is as yet unable to distinguish simple leucorrhœa from a venereal discharge, and hence it is impossible to ascertain whether a woman labouring under simple leucorrhœa can cause a blenorragia.

The fourth kind of morbid secretions are those peculiar to certain organs ; they are presented to the notice of the reader in consecutive chapters on super-secretion of the sweat, ephidrosis ; of fat, polysarcia ; of saliva, ptyalism ; of the bile, constituting oftentimes the disease known as common cholera morbus ; of the urine, diabetes insipidus ; of the milk, galactorrhœa ; and of the sperm, spermatorrhœa.

Among these, the most important and which receive most attention, are cholera and spermatorrhœa. In the chapter on the former is an allusion to our cholera infantum, as if it were the same disease. The author merely speaks of the mode of treating it in this country by calomel and emetics [?], which in France, he says, would be considered far less rational than the treatment recommended by M. Ménard, to use only iced drinks for the child and to keep it from nursing until the evacuations cease. Sufficient evidence that our cholera infantum is a disease entirely unknown in France.

The pneumatoses or gaseous secretions are the fifth kind of morbid secretions to which attention is directed. These are emphysema, whether traumatic or spontaneous,—not the vesicular emphysema to be described in a subsequent part of the work,—pneumatoses of the digestive tube, the spontaneous development of gas in the organs of the circulation of the blood,—causing sudden death,—pneumatoses of the urinary organs,—of which M. G. denies the occurrence,—of the genital organs of women, of the serous and synovial membranes, of the peritoneum—of which the occurrence is very doubtful,—of the pericardium, and of the thorax. Pneumo-thorax, says M. G., is perhaps always consecutive to different alterations of the lungs, pleura or some neighbouring organ, or of the thoracic paries themselves, though under certain circumstances of commencing putridity, aëroform fluids may be met with in the chest.

We have thus arrived at the conclusion of the first volume of the work, upon which we have dwelt so long, that we shall be obliged to pass more rapidly over the contents of the second which commences with an account of poisoning ; or “that morbid condition which results from the introduction into the economy by some method or other, of an agent which ruins the health or entirely destroys life without acting mechanically. The substances capable of producing these effects are known under the names of poisons.” These, M. Grisolle classifies according to the arrangement of M. Orfila, as irritants, narcotics, narcotico-acrids, and septic.

Among the irritant poisons he gives a summary account of phosphorus, iodine, bromine and chlorine, of sulphuric, nitric, oxalic and arsenious acids, speaking merely of the pathological appearance of the body, of the symptoms of the consequent disease, of the diagnosis, prognosis and medical treatment, omitting all allusion to the medico-legal questions connected with the subjects.

Poisonings by the alkalies and their compounds, by preparations of antimony, gold, silver, tin, bismuth, zinc, and copper, are each briefly treated of in the same manner as those above mentioned. Their description is followed by a careful study of the effects of the preparations of lead, a subject upon which M. Grisolle has elsewhere, in his *Essai sur le colique de Plomb*, ably written, and to which some twenty-six pages of the present work are devoted by him.

Independently of the irritant effects of large doses of the acetate, for example, this metal excites “a special action upon nutrition and consecutively upon different parts of the nervous system, causing, in effect, neuralgic pains in the abdomen and limbs, or delirium, coma, and often convulsions, or more or less extensive paralysis.”—II. 18.

The bluish colour of the gums, which is said to be the evidence of intoxication by lead, does not show any thing more, says M. Grisolle, than that there is lead in the system, and that the individual has been exposed to its action, without necessarily being poisoned by it. All the external parts of the body may present the same black or blue colour, when they are placed in contact with sulphur, as in a sulphur bath ; "the colour being due to the formation of a sulphuret of lead, by the action of the lead, which, when volatilized, is deposited upon the gums and teeth, and sulphuretted hydrogen which is disengaged throughout the whole extent of the digestive organs."—II. 20.

M. Grisolle gives an account here of lead colic, pain in the limbs, paralysis, and cerebral accidents, of which the relative frequency, according to M. Tanquerel, is expressed by the numbers 12, 8, 2, and 1.

His treatment of lead colic, when vomiting and general symptoms of gastric disturbance exist, is to begin with an emeto-cathartic—R. Tart. emet. grs. ij, or iij; sulph. sodæ ʒj—followed on the same day by one or two strongly purgative enemata. The abdomen is to be covered with emollient cataplasms, and one to two grs. opium are to be given at night to procure sleep. If there is no vomiting, he commences at once with drastic cathartics, preferring the croton oil, of which one or two drops in pills are given, repeating the dose after 3 or 4 hours if it does not purge. This treatment must be continued for several days, even if the colic has entirely ceased, taking half a drop only every morning. This, with proper dietetic and hygienic treatment, generally suffices for the cure.

Saturnine encephalopathia, caused by the absorption of lead, manifesting itself by exaltation, perversion or abolition of the functions of the brain, was first described by M. Grisolle in 1836, a description, which, he says, M. Tanquerel has appropriated to himself, often word for word, without adding materially to it. This encephalopathia may manifest itself under three forms ; 1st, the delirious ; 2d, the convulsivo-epileptiform ; and, 3d, the comatose ; these may co-exist or succeed one another. In about one-half who die with cerebral accidents, the brain and spinal marrow exhibit not a trace of disease. In the other half, the brain appears hypertrophied, the convolutions being flattened and the anfractuosities scarcely marked, so that the surface appears almost smooth. The cerebral pulp is sometimes yellowish, scarcely ever injected, generally entirely exsanguious, its consistence being sometimes natural, sometimes increased or even diminished ; the ventricles contain scarcely any or no serosity, and their cavity is sometimes diminished one-third or even a half.

The diagnosis of this form of disease must be based rather upon the symptoms characteristic of saturnine colic, than upon any peculiarity in the form or nature of the cerebral symptoms. Amaurosis coming on suddenly and ceasing after some hours or days, and slowness of the pulse, which is quite a common phenomenon in saturnine poisoning, at least in the early stages, may point to the nature of the attack in some cases. The prognosis is always very serious, more than one half die, the convulsive form being the most fatal. The patient rarely dies if he survives six or seven days, death occurring generally in two or three, or often in a few hours. No particular treatment has proved successful ; unless the expectant, which, according to M. Tanquerel, M. Rayer has employed most advantageously.

Under the head of poisoning by mercury, we have full accounts of hydrargyria, mercurial trembling and mercurial cachexia. From them

the author proceeds to speak generally of the vegetable irritants, and then of the animal irritant poisons, as cantharides, muscles, &c.

The narcotic poisons, and especially opium and hydrocyanic acid, next pass in review. M. Grisolle ranges among the narcotics, alcoholic liquors, which cause three orders of symptoms; drunkenness, delirium tremens and spontaneous combustion, which receive attention in the order named. With respect to the use of opium in delirium tremens, M. Grisolle says it often fails; indeed, he objects to the administration of large and repeated doses of it, for fear that it may bring on fatal coma. He recommends no particular method of treatment, rather inclining, however, to adopt the expectant method of Esquirol and Calmeil, who give only sugared drinks, and warm baths, with emetics, purgatives and bleeding when required by the symptoms.

Poisoning by the sulphate of quinia is next spoken of. M. Grisolle refers to the enormous and poisonous doses which it has become the fashion to give of this medicine, and which, he truly says, are "unnecessary, dangerous, and only calculated to bring the profession into disrepute."

"Some unfortunate facts observed in man, especially during the present year, (1843,) confirm, in all respects, the results obtained among animals (Magendie and Mélier); thus patients to whom 4, 5 and even 6 grammes (80, 100, or 120 grs.) of sulphate of quinia have been administered, have experienced various accidents, of which three degrees have been noticed. In the first, the nervous system is the seat of the symptoms, which are only exaggerations of those observed from ordinary doses; viz., headache, agitation, phenomena of drunkenness, some trouble in vision, and often deafness; in the second degree, delirium, convulsive movements and more extensive paralysis occur, with signs of congestion and inflammation of the lungs, and even hematuria; and finally, in the highest degree, the strength is gone, the debility extreme, and the patients, deprived of sense and motion, become comatose, and may thus die. Those who escape, recover slowly, remain for some time feeble, and many of them remain, during life, blind or deaf."—II. 64.

Carbonic acid is the next point which is studied. We would here remark that there is much reason to believe, from recent researches, made in France, that the deleterious effects which have been hitherto considered as due to the action of carbonic acid, are, in fact, to be attributed to the agency of carbonic oxide, which is always given off when charcoal undergoes slow combustion.*

The narcotico-acrids are next briefly considered; to them succeeds an examination of the fourth kind of poisons or the septic; including among these, poisoning by the introduction of putrid matters into the system, by ergotized rye, by gases from necessaries, by the venom of animals, as the viper, rattlesnake and venomous insects. These are all sufficiently treated of, though very briefly; and bring the author to the consideration of the different kinds of *virus*, the syphilitic, hydrophobic, the virus of malignant pustule and of anthrax, of glanders and of farcy.

M. Grisolle rejects entirely the doctrine which teaches that there is a distinction between the virus of syphilides and blennorrhagia. They are identical in nature, says he, for if you neglect them you will see arise in both, the same constitutional accidents, which can recognize no other cause than venereal infection. Though it is generally true, he continues, that blennorrhagia will not produce a chancre, nor a chancre blennorrhagia, it is too exclusive to say that this is always the case, for the reason above

* Ann. d'hygiène pub. et de Méd. Lég.

cited, which, certainly, is not a sufficient one, for it is not generally admitted, and, besides experiments, of which, however, he denies the applicability, prove directly the contrary. He recommends deep cauterization of the chancre, whatever its form, with nitrate of silver at the commencement, to be followed with dressings of aromatic wine and lint. If it resist several cauterizations, we should have immediate recourse to the specific mercurial treatment. Indeed, M. Grisolle thinks that the use of mercurials, as curative agents, is always advisable, or, at any rate, to establish the cure and prevent consecutive accidents,

"For who can affirm," says he, "that infection has not taken place during incubation, *i. e.*, between the inoculation of the virus and the moment at which induration and the vesicle commence?"—II. 98.

In speaking afterwards of constitutional syphilis, he is again at variance with M. Ricord, who asserts that this cannot occur unless there has been absorption of the venereal virus, an absorption which can only take place from the surface of an ulceration, and that hence, chancre is the necessary antecedent of the constitutional symptoms. M. Grisolle's arguments upon all these questions are entirely inconclusive, and do not establish the position he aims at. A good account of blennorrhagia, whether acute or chronic, of *syphilides* or the cutaneous affections, produced by the constitutional action of the syphilitic virus,—taken chiefly from M. Cazenave's valuable treatise,—of the affections of the mucous membranes and cellular tissue of the iris, of the testicle,—according to Sir A. Cooper, its chronic engorgement,—and of the fibrous and osseous tissues, closes the subject of syphilitic disease.

As to its prophylaxis, M. Grisolle says that whoever would devote himself to the glorious work of discovering a means of prevention, would deserve, if successful, the gratitude of mankind; "for the times are past, when a retrograde *moral* and religious prejudice caused the pox to be regarded as a just chastisement of libertinage, or taught that it was immoral and contrary to the views of Providence to occupy one's self with the attempt to discover the means proper to prevent contagion."—II. 149. We must confess that these are droll sentiments, and that we have yet to learn that the times referred to in the first section of this proposition are yet past. Certainly a genuine, correct *morale* would teach that the only and best prophylaxis is to avoid the causes.

Having given a short chapter to framboësia, the author proceeds to the subject of hydrophobia. He ridicules the idea that no such disease exists and that would make the symptoms indicative of rabies the result of imagination and of alarm. This disease can only be communicated by the frothy discharges from the mouth, in contact with an abraded surface; and this frothy matter is not secreted by the salivary glands, but comes from the air passages alone, as dissection decisively proves. M. G. states, that in the human subject, there is no appreciable lesion after death; a fact of which he has satisfied himself by six or seven autopsies, at the Hotel-Dieu of Paris.

"Thus in persons dying of hydrophobia, we find only varying and purely accidental lesions; the same is the case in animals. The observations hitherto published to prove that in hydrophobia there is an inflammation of the mucous membrane of the air passages, or of the digestive organs, or of the nervous centres, can inspire no confidence; for it is easy to see that authors have been contented with a simple and generally passive redness to admit the existence of inflammation."—I. 153.

Malignant pustule and malignant anthrax, virulent affections transmitted

to man by certain domestic animals, characterized by gangrenous inflammation of the integuments, rarely extending beyond the cellular tissue in the former, but more deeply in the latter, affecting those who attend or slaughter the animals or dress their skins, developing themselves always in the part in contact with the infected animal, and capable of being transmitted from man to man, are very serious and fatal diseases from the constitutional symptoms to which they give rise, and should be arrested by the immediate destruction by caustic of the part affected.

As to glanders, once considered peculiar to the solipedes, but now known to be transmissible to man, M. Grisolle thus sums up his opinion :

" It is a virulent disease resulting from the introduction into the economy of a deleterious substance furnished by the solipedes, attacked with glanders, and existing in the nasal secretions, pus of abscesses, and perhaps also in the blood. From the cause which produces it, and the grave symptoms which accompany it, it must be considered a general affection, the local alterations which characterize it not being the cause, but the expression of the general condition. In man, acute glanders is identical with that in the horse. The same rheumatic pains, the same nasal flux, the same eruptions and ulcerations of the nasal fossæ, the same pulmonary inflammation, the same muscular abscesses, the same pustular eruptions of the skin, as well as gangrene, are observed in both. The only difference at all remarkable, consists in the alteration of the submaxillary lymphatic glands, which are constantly inflamed in the solipedes and rarely or only to a feeble degree in man."—II. 170.

The author's account of this disease and of farcy, both in the acute and chronic states, is full and very interesting, and well worthy of careful perusal.

The sixth class of diseases, according to the division laid down by M. Grisolle, are lesions of nutrition. They are arranged under seven distinct sections, each relating to some specific lesion, viz., 1st, hypertrophy ; 2d, atrophy ; 3d, induration ; 4th, softening : 5th, gangrene ; 6th, ulcerations ; alterations which are studied as affecting certain organs in particular; in the 7th, he reviews certain alterations, which are most generally consecutive to some one of the above lesions, viz., 1st, contraction and obliteration of hollow organs ; 2d, their dilatation, and 3d, their rupture, laceration and perforation.

After a general consideration of hypertrophy, its occurrence in the brain,—a subject especially studied only during the present century—is particularly dwelt upon. The brain presents the same appearances as in saturnine encephalopathia ; this lesion occurs equally at all ages of life, and is even congenital, being probably always a fatal one, chronic in its march, and manifesting itself by severe headache, disorder of the intellect, convulsions and partial paralysis, without fever. Hypertrophy of the spinal marrow is more rare and reveals itself by no special symptoms.

The chapter on hypertrophy of the heart is very ably and carefully written. M. G. considers it an error to suppose that hypertrophy of the left ventricle predisposes to hemorrhage and to softening of the brain. Notwithstanding the numerous supporters of this opinion, M. G. says,

" It is contradicted by Rochoux and is in opposition to the numerous facts collected by himself (M. Grisolle), and to the observations analyzed by M. Louis, who has never in a single instance found hypertrophy coincide with a cerebral hemorrhage, and who, besides, has noted the occurrence of softening of the brain less often in cases of hypertrophy of the heart, than in the course of several other affections, as phthisis. We, (Mr. G.), have proved elsewhere from the writings of the same author, that hypertrophy of the right ventricle is not, as has been pretended, an active cause of pulmonary hemorrhage."—II. 191.

As to Valsalva's treatment of hypertrophy of the heart, the author deems it barbarous, having never cured any body, and having certainly often hastened death. He agrees with Hope in the opinion, that bleeding often fails as a palliative, especially when there is also considerable dilatation of the cavities.

Hypertrophy of the liver differs from cirrhosis which the author afterwards treats of, by the fact, that in the former, both the red and yellow substances of the liver are increased, causing a more or less considerable enlargement of the organ; while in the latter the yellow alone increases, the red, in fact diminishing, so that the liver either retains its normal size or is actually diminished in volume. Hypertrophy of the spleen, one of the sad heritages of those who suffer from intermittent fever, is briefly treated of.

Hypertrophy of the thymus gland, which has recently been invoked as the cause of a form of asthma, receives a short notice from M. Grisolle, who thus concludes:

"We shall insist no further upon the description of this disease, of which the existence is not even yet proved; [he does not allude to the American cases.] No one in France has ever observed it, and the statements which have come from foreign countries are so incomplete and so little precise, that we are authorized to ask if thymic asthma is an actual disease, or if there have not been confounded under this name different affections of the brain and of the pectoral organs; such, at least, is the opinion of many pathologists, and our own among the number.—II. 208.

Hypertrophy of the thyroid gland and elephantiasis of the Arabs, are the subjects of the concluding chapters relative to this form of disordered nutrition. These are followed by some general remarks on atrophy, generally, and then some accounts of it as occurring in particular organs, as the brain, the spinal marrow, the heart and the liver; all being incurable affections.

Induration of the same organs, a lesion which cannot be recognized during life, and consequently presents no indications for treatment, is next briefly spoken of; to these descriptions succeed those of a more important lesion, viz., softening, which is very frequent, has been observed in almost all the organs, and is now generally considered as independent of inflammation: the irritation in an organ giving impulsion to an aberration of nutrition, but not causing it or being at all necessary, either antecedently or actually, to its occurrence.

Softening of the brain first claims attention. Differing from MM. Lallemand and Durand-Fardel, M. Grisolle says:

"We believe that cerebral softening should be considered a special lesion, a peculiar mode of destruction, common to several of the organs, and of which the mechanism, and the immediate or proximate cause entirely escape us in the greatest number of cases; whilst in some it appears to be owing to an impoverishment of the economy, or to a diminution of the activity of the encephalic circulation."—II. 244.

Softening of the spinal marrow, of the heart, of the stomach, of the intestinal mucous membrane and of the bones,—under the heads of rachitis and osteo-malacia,—are described in separate chapters. But we are compelled to pass over these interesting accounts and also those relative to gangrene,—particularly studied as occurring in the lungs, mouth, pharynx and vulva,—and to those on ulcerations,—which last are dismissed with some very general and brief remarks,—to take up the consideration of the seventh kind of lesions of nutrition, viz., those causing contraction, oblite-

ration, dilatation, perforation or rupture of hollow organs. These are ordinarily consequent upon some one of the lesions of nutrition, already indicated, though they require separate description, as some of them appear to occur spontaneously and in consequence of some special and as yet undetermined lesion of nutrition,—as noticed particularly with certain dilatations and perforations of hollow organs and passages,—and to offer the only source of therapeutic indication.

After some general remarks upon the causes, nature, &c., of contractions (*retrecissements*) and obliterations, those occurring at the orifice of the heart are especially dwelt upon. This chapter is exceedingly interesting and ably drawn up, summing up with much care and knowledge the whole subject, and presenting an excellent account of those most important lesions. As to their diagnosis, M. G. thus speaks, in unison with MM. Chomel, Piorry, &c.

"Their diagnosis can only be established by the *simultaneous existence* of several symptoms; thus, a permanent sound as of a bellows, file or saw, at the precordial region, coinciding with an irregular, unequal, intermittent pulse, with dyspnœa, and the other signs of disease of the heart, will indicate *almost certainly*, but not indubitably, that there is a contraction of one or more of the orifices of the heart. M. G. is thus reserved in his opinion, because he has many times seen all these signs together in an individual dying of hypertrophy with dilatation of the left cavities of the heart, without any alteration of the valves and orifices; he has besides met with persons, who, although labouring under considerable contraction of the orifices of the heart, nevertheless presented no morbid sound at the precordial region."—II. 293.

Contraction and obliteration of the arteries and veins are studied in separate chapters; his account of arteries being drawn from a paper by M. Barth, which contains an analysis of a large number of cases, and which has never as yet been published. The air passages, the cesophagus, and the intestinal tube may also suffer from this lesion, which, as occurring in the intestines, causing their occlusion, or *ileus*, is studied in a separate chapter.

Dilatations are the next alterations passed in review. They have been observed in the bronchi; but more especially in the vesicles of the lungs, constituting the disease known by the name of vesicular emphysema, so admirably described by MM. Louis, Jackson, Beau and Stokes. MM. Louis and Stokes have satisfactorily established that in these cases the volume of the heart was increased, and that in proportion to the extent and duration of the emphysema. M. G. says,

"This disease is essentially characterized by the dilatation of the pulmonary vesicles, whose parietes have undergone different changes of nutrition (hypertrophy, atrophy, or destruction). These changes necessarily render haematoses difficult, which fact explains the habitual dyspnœa of the patient and the organic affections of the heart which often result from it."—II. 340.

Dilatation of the cavities of the heart or of portions of a cavity, and of the lymphatics and aneurism of the aorta, pectoral and abdominal, dilatations of the cesophagus, and of the stomach, are each sufficiently described in separate chapters, and bring us to the consideration of the only remaining lesions of nutrition, lacerations, ruptures and spontaneous perforations. Among these is placed the subject of *cyanosis*, or, according to the author, "the congenital or accidentally established communication either between the right and left cavities of the heart, or between the vascular trunks which proceed from it." He enumerates some twelve different congenital de-

formities which may allow the admixture of the arterial and venous blood, stating, at the same time, that the most usual one is the persistence of the foramen ovale. In rather more than one half the cases, MM. Louis and Gintrac have shown that the valves of the right side of the heart were deformed, and in all these the lesion occupied the valves of the pulmonary artery. "We believe," says M. G., "with M. Louis, that these coarctations of the pulmonary orifice are for the most part a congenital lesion, and it is rational to refer to this obstacle the persistence of the foramen ovale, when these two lesions coexist in the same individual." "The persistence of the foramen ovale and of the arterial canal, among the lesions enumerated, are those which appear to allow the longest life."—II. 375. This opinion is fully sustained by the authority of Craigie and of Dr. Moreton Stillé, in his interesting thesis upon the subject of cyanosis. (See this Journal for July, 1844, p. 25.) M. Grisolle agrees, farther, with those who attribute the blue colour to the trouble and embarrassment of the circulation; this embarrassment being caused by the primary deformed condition of the heart or of the lesions which accompany it.

These lesions are finally disposed of in separate chapters relative to the rupture and perforation of the aorta, of the diaphragm, of the abdominal organs, the spleen, liver, &c., of the bladder and of the uterus.

Organic transformations and accidental morbid productions constitute the seventh class of diseases, which are considered under two chief divisions: 1st, those diseases which are characterized by the transformation of one tissue into another or by the development of new tissues analogous to or identical with the natural tissue; 2d, those characterized by the formation of new products entirely foreign to the economy. In the first he merely speaks of those of practical importance, as the fatty, serous, horny, cartilaginous and bony degeneration or transformation, terminating with some remarks on polypi. Among the second kind, he includes, 1st, inorganic concretions; 2d, entozoa; 3d, morbid formations, which, when deposited in the tissues, depress them, penetrate them, and even convert them into their peculiar substance; these are cancer, tubercles and melanosis.

It is sufficient to mention that he briefly describes the fatty degeneration, especially that of the heart, which is sometimes loaded with it; he then passes to an account of the serous productions, as cysts, especially of the brain, liver, spleen, kidneys and ovaries. As to the causes of the ovarian cysts, M. G. says nothing precise is known, their development being almost always spontaneous. He thinks that nothing but a palliative treatment of them should be attempted, as he is convinced by experience of the impotency of medication to arrest or cure them, and deems all the propositions for their extirpation by surgical operations, "as at least imprudent and not justifiable by the citation of some successful cases."—II. 400.

The horny or epidermic productions—ichthyosis, pityriasis, lepra and psoriasis,—the cartilaginous and bony transformations, which may attack almost every tissue, and polypi, receive due attention, leading the author to the study of the second kind of morbid productions. Among these, inorganic concretions or calculi are considered first generally, and then as occurring in the intestines, gall-bladder, biliary ducts, and urinary organs. Then follow some interesting remarks upon the various parasitic animals, entozoa and epizoa, each of which is the subject of special observation and description in the pages before us. As to the mode of origin of the entozoa, M. G. ranges himself with those who maintain their spontaneous generation, "under the influence of pathological causes," which he con-

siders "as not more extraordinary than the formation of zoosperms in the human testicle; these are equally organic acts, morbid in the one case, physiological in the other, of which the mechanism entirely escapes our explanation; once formed, the entozoa reproduce themselves in various modes."—II. 442.

M. Grisolle now commences his discussion of the third, and by far most important class of these diseases, viz., that containing cancer, tubercles and melanosis. Our remarks have extended to such a length, however, that we can but briefly point out some of the author's views upon these interesting subjects.

Scirrhous and encephaloid tumours are regarded as merely two alterations arising under the influence of one and the same diathesis, causing the same accidents, and requiring the use of the same therapeutic means. M. Grisolle notices the statements of MM. Andral and Gavarret, that they found by microscopic observation, in the blood, after the disease was fully established, a large number of well-marked pus globules, and alongside of them elliptic lamellæ, granitic on their surface, much larger than the pus globules, and of a form much more regular than that of simple albuminous plates. These same lamellæ were also observed in great numbers in the ichorous matter from the midst of the cancerous masses.

This alteration is studied as occurring in the brain,—the remarks on it being chiefly taken from M. Calmeil's excellent summary in the *Dict. de Médecine*,—in the lungs and pleura, in the œsophagus, in the stomach,—of which *black vomiting* and an epigastric tumour are the only reliable pathognomonic evidences,—in the intestines, pancreas and liver, in the kidneys, and finally in the uterus. The chapter relative to cancer of the uterus is one of the most complete in this volume, not a point of interest being passed over, though it is as concisely drawn up as possible.

Tuberculization next receives attention, the author commencing with an admirable summary of the amount of our knowledge relative to tuberculization in general,—his opinions respecting the origin, mode of development, softening, &c., of tubercles, agreeing almost entirely with those of M. Louis. To establish the diagnosis of acute tuberculization, a common disease among children, is exceedingly important. M. Grisolle says,

"It may be suspected in children who, naturally weak, are attacked without cause, or after an eruptive fever, and especially measles, with a moderate but continuous febrile movement, persisting, during several weeks, without evident cause; for, as MM. Rilliet and Barthez have remarked, there is no other disease of childhood which, with an acute or subacute march, does not exhibit, within ten or twelve days, local symptoms sufficiently decided to give a more or less positive indication of its nature."—II. 527.

With respect to the treatment of children threatened with tuberculous disease by their constitution or by hereditary predisposition, M. Grisolle traces some hygienic rules, condensed from the new edition of M. Louis' work on phthisis.

"The children of whom we speak should be confided immediately after their birth to vigorous nurses, who present every trace of the sanguine temperament, and enjoy irreproachable health. The children should be exercised in the open air and sun-light, and should live in an airy place with a good exposure. At the period of weaning, animal food should be given, commencing with the lighter articles, as broths, meat jellies; these being gradually replaced with mutton, beef, and dark meat generally; some good wine should also be allowed them; and the hours of eating should be properly regulated,—the children being prevented from eating at all times of the day, and from indulging in indigestible articles, as

pastry, which have the effect of deranging the functions of the stomach, causing diarrhoea, which always enfeebles the children, and thus becomes an efficacious cause of tuberculization. If the digestion is languid, or the appetite diminishes, some bitter infusion may be given to excite the activity of the stomach. At the same time the functions of the skin should be excited from time to time by dry frictions over the whole body, and by the administration of salt baths. We should also, as recommended by M. Louis, watch over their sleep; some scarcely sleeping at all without any evident reason. Such a state of things is always injurious, especially in the children of whom we are treating; we should therefore endeavour, as soon as possible, to restore sleep by the administration of an opiate several days in succession. It is unnecessary to remark that the fears entertained by some physicians, that opium may arrest the intellectual development of children, are entirely groundless."—II. 529.

At a more advanced age, every effort should be made to invigorate the constitution, by the use of exercise in the open air, bathing, especially in salt water, the use of bitter infusions and ferruginous preparations, where the children are pale and suffer from bilious diarrhoea, and by giving them regular habits of eating and sleeping.

Tuberculous meningitis is the first special form of tubercles described by M. Grisolle. The means of diagnosing this from simple inflammatory meningitis are carefully exposed. In the latter, the symptoms being exactly the same as in the former, declare themselves clearly and distinctly from the start, the symptoms of excitement being generally more intense, and occurring sooner in it, the march being more rapid, increasing and proceeding rapidly to a termination; while in the tuberculous form, the attack generally occurs in persons who have been suffering for some time, and present, more or less, the signs of tuberculous disease, with temporary violent exacerbations of the symptoms, the patient being in the interval calm and rather dull; the fever may be slight, or even absent, and the march of the disease is remarkable for its slowness, irregularity and alternations of ease and suffering.

A good summary account of tubercles in the brain, chiefly borrowed from M. Calmeil's article in the *Dictionnaire de Médecine*, brings us to the important chapter on pulmonary phthisis, which is, in fact, an abstract of M. Louis' valuable researches upon the subject. Nor does the author forget to acknowledge and make use of the important facts published by Carswell and Walshe.

The cretaceous transformation of tubercles of the lungs, unquestionably the evidence of a curative process on the part of nature, is not rare, since M. Roger, we are told, discovered it in about half (51 in 100) of the old women whom he opened at Salpêtrière. M. R. has farther proved that these cretaceous masses are the result of transformed tubercles, and of nothing else. He has also ascertained that most generally not more than one cicatrix is ever met with in the lungs, and that it is rare to find two or three in the same individual. These are extremely important facts in proof of the curability of phthisis, but they also show that cure can only take place when the alteration is not very extensive. M. Grisolle, agreeing with MM. Andral and Louis, states that the opinion of those who regard *fistula in ano* as of frequent occurrence among phthisical patients, is not founded in facts; for in 800 tuberculous patients, M. Andral has met with it but once.

Tubercles in the bronchial glands, mesenteric phthisis, and tubercles in the kidneys, are the subjects of separate chapters; these are followed by one on scrofula, which the author defines to be "a constitutional condition characterized by different lesions,—occurring in the soft parts and in the

bones,—and particularly by chronic engorgement and tuberculization of the lymphatic glands.” M. Grisolle does not agree with M. Lugol in the extent to which his opinion of the hereditary transmission of this disease is resorted to, to explain its occurrence; while admitting with him that it is the most powerful agent in its production, M. Grisolle considers that the disease arises from a multitude of causes, none of them, however, acting surely and constantly.

A chapter on melanosis closes the subject of accidental morbid productions, and is followed by the description of the eighth class of diseases or the neuroses. These are divided, as by M. Andral, into five groups.

“In the first are those characterized by a derangement of the sensibility which is sometimes exalted even to pain, sometimes diminished and sometimes even entirely extinguished; in the second group, are those characterized by a lesion of movement; in the third, are those producing disturbance of the intelligence, as the different species of delirium; in the fourth, those causing a simultaneous derangement of all the functions; and in the fifth, those peculiar to certain organs.”—II. 611.

We would gladly dwell at some length upon this important class of diseases, which are exceedingly well treated of in the volume before us—M. Valleix’s work upon the cephalo-rachidian nerves being taken as the author’s most reliable authority; but we must content ourselves with a mere enumeration of the points upon which he has touched. He prefaces his account with some excellent remarks on neuralgia in general, consisting in a functional disturbance without material alteration of the organs affected. He then proceeds to present the characters, &c., of different special forms of it, as the trigeminal, hemicranial, cervico-brachial, intercostal,—or, as he says, the spinal irritation of the American and English authors,—lumbo-abdominal, ileo-scrotal and testicular, and that of the sciatic nerve, commonly called sciatica. Angina pectoris, which M. G. says is a neuralgic affection, and not essentially connected with any organic disease of the heart or of any other organ, though it is at present difficult to say what nerves are affected, is the subject of an interesting chapter. It is followed by accounts of gastralgia, contradistinguished from the other neuroses peculiar to the stomach, of enteralgia and hyperæsthesia or exalted sensibility of the skin.

The second kind of neuralgias are those characterized by lesions of movement. Under this head, tetanus, contractions, (*contractures*), chorea, paralysis and œsophagism are considered; the reader being referred to the fourth kind for accounts of the complex neuroses, eclampsia, epilepsy, hysteria, and catalepsy. The third kind are those which relate to derangements of the intellect; as delirium, insanity, hypochondriasis and idiocy; all of which receive a full share of the author’s attention and are carefully treated of.

The fifth kind of neuroses, or those peculiar to certain organs, are for the respiratory organs, nervous aphonia, pertussis, asthma and hiccup; for the heart, palpitations and syncope; for the stomach, bulimia, pica, dyspepsia and nervous vomiting; and for the genital organs, hysteria, priapism and anaphrodisia; neuroses, which as it will be observed, embrace a number of important diseases, of frequent occurrence and requiring skillful management. M. Grisolle enters fully into the discussion of their peculiarities, and lays down careful rules for their treatment. We must pass over these to notice very briefly the remaining class of diseases recognized by our author, or those which are peculiar to certain organs or tissues, and which could not advantageously have been brought under any other general head.

The diseases peculiar to the digestive organs are first considered, the author here speaking of the accidents to which children are liable during the first dentition, of gastric embarrassment, intestinal derangement, constipation and intestinal invagination. It may seem somewhat extraordinary that the next disease of the digestive organs should be diabetes, "a disease characterized by the presence in the urine of a more or less considerable quantity of sugar." M. Grisolle thus justifies himself for this arrangement.

"Attempts have been made to localize it, by calling it a general affection, consecutive to an alteration of the blood; or by making it a special disease of the kidneys,—and this is done by a large number of pathologists,—or by placing its seat in the digestive organs. This last opinion is the only admissible one. We are, in effect, led to believe that under the influence of a special disposition, of which the cause escapes detection, sugar is formed in the stomach, particularly at the expense of the fecula; showing why the thirst and the quantity of sugar in the urine are in proportion to the quantity of fecula swallowed. The sugar formed passes thence into the blood, whence it is eliminated by the kidneys, as would be any other foreign product. This theory has been perfectly developed by M. Bouchardat (as well as by others) in his *Annuaire de Thérapeutique*, 1840."—II. 816-17.

Jaundice is the only remaining affection of the liver which has not yet been considered. The affections peculiar to the heart are, insufficiency of the valves, and sanguine concretions commonly described under the name of polypi. Asphyxia, either the consequence of the inhalation of gases unfitted for respiration, or caused by mechanical obstruction to the entry of the air into the lungs, 1st, by compression of the thorax, 2d, by strangulation, and 3d, by submersion, is the only form of disease, peculiar to the respiratory organs, here described.

The disorders of the menstrual function, as dysmenorrhœa, deviation of menstruation,—when the discharge of blood takes place periodically from some other organ than the uterus and vagina,—amenorrhœa, and the final suppression of the menses at the critical age, are the diseases peculiar to the genital organs which remain to be examined, and are treated of in a clear, satisfactory, though concise manner.

It only remains now to consider the subject of rheumatism, a disease peculiar to the muscular and fibrous tissues. M. Grisolle studies it as it occurs in each of these tissues, prefacing with some general remarks his description of particular kinds of muscular rheumatism, as torticollis, pleurodynia, lumbago, &c.

Acute articular rheumatism, which, from his own examinations, M. Grisolle states, does not leave, at least in the great majority of cases, any notable lesion in the articular surfaces, is an "affection of a peculiar nature, and one which must in all cases be distinguished in theory as well as practice from the genuine phlegmasiæ." The author, after examining the grounds upon which the distinction between it and gout have been based, thus concludes:—"In a word, we believe with MM. Chomel and Regnier, that nothing authorizes a fundamental distinction between gout and acute articular rheumatism."

A few brief remarks must close this extended notice of one of the most valuable contributions to the medical literature of the day,—valuable, not so much for originality of views, to which it does not pretend, as for the excellent summary it affords of so great a number of diseases,—a number not exceeded, if even equaled in any other treatise on internal pathology,—for the judicious discrimination between what is useful and established in science, and that which is frivolous and theoretical,—for the adoption of

the system of rigorous analysis of facts as the foundation of the descriptions contained in its pages,—for the just appreciation of the labours of others, corrected and controlled by the author's own enlarged experience, and for agreeable style and vigorous description, imparting all the interest of novelty and originality.

It must be recollected, however, that with some honourable exceptions, the work is made up from the accounts of French pathologists and therapeutists, a selection very proper as regards pathology, but not quite so much so, perhaps, as respects therapeutics; which certainly is the least satisfactory part of the book, though we must confess that in reference to the treatment, the author's views appear in general to be rational and practical.

In a word, this is the best French text book on internal pathology we have met with, and must commend itself to the French student. With some additions it might very advantageously be translated and adopted in our own schools. Although it would hardly take the place of some of the excellent treatises in our own language, there is room enough for another such as this, which is not surpassed for conciseness of description, and which presents, at least, as compendious and lucid a survey of the elements of the practice of medicine as any other general treatise at present accessible to the student.

C. R. K.

BIBLIOGRAPHICAL NOTICES.

ART. XI.—*Narrative of the United States Exploring Expedition during the years 1838, 1839, 1840, 1841, 1842.* By CHARLES WILKES, U.S.N., Commander of the Expedition, member of the American Philosophical Society, &c. In five volumes and an atlas. Philadelphia: Lea & Blanchard, 1845.

A NOTICE of a voyage of discovery, however interesting its incidents may be to the general reader, might appear out of place in a work devoted to medical science, but the splendid volumes now before us, contain so much that belongs to our domain, that we cannot forbear laying before our readers a few extracts from them. This we shall do without attempting to present even an outline of the voyage or of the difficulties attendant on its progress. All of our readers are aware that by an act of Congress of 18th May, 1836, an expedition was ordered to be fitted out for the purpose of exploring the great southern ocean. Many causes, to which it is not our province to advert, delayed the execution of this undertaking until 1838, at which time Captain Wilkes was appointed to conduct it. We may, however, be permitted to say, that on no one among our many gallant and enterprising officers, could the command have more appropriately been bestowed than on him, when the requisites for its success were indomitable energy and perseverance, nautical skill, and a highly cultivated mind; no one can rise from a perusal of the narrative without being thoroughly satisfied that every thing was done that it was possible to effect, under the circumstances in which he was placed.

The expedition, consisting of the sloops of war, Vincennes and Peacock, the ship Relief, the brig Porpoise and tenders, Sea Gull and Flying Fish, left Hampton Roads on the 18th of August, 1838, for Madeira, where they arrived on the 16th September. Captain Wilkes states, in 1836 the population of this island and that of Port Santo amounted to 115,447, that the births in 1835 were 4102, of which 425, or upwards of one-tenth, were illegitimate; the deaths the same year were 2751, showing an excess of 1351 of births; the marriages were 1065.

After leaving Madeira, the squadron proceeded to Rio Janeiro; among the remarks made during this passage, we find the following interesting notice as regards the deposit of dew:—

"We had now (long. 17 W. lat. 0) heavy deposits of dew, on several fine and cloudless evenings. Indeed, the sun had scarcely set before the ship was quite wet with it. One of the essential requisites supposed necessary by Dr. Wells for a deposit of dew, was entirely wanting in this case, viz.: that 'the temperature of the body on which it was deposited, should be considerably lower than the surrounding air,' the temperature of the air and ship having remained the same for several days at about 78°; all objects, hammock-cloths, spars, sails and rigging, so far as could be ascertained, showed the same, and at the time when the dew was observed to be most copious, we had a fine breeze." This is certainly a singular phenomenon, and is, as the author observes, at variance with previous observations. The only mode in which it can be accounted for, is by an exceedingly rapid radiation from the several objects mentioned, the moment the sun sunk below the horizon. . The expedition reached Rio Janeiro on the 23d Nov., and remained there until early in January, employed in repairing the vessels, during which time, the officers and naturalists were fully occupied in various interesting observations and researches; those of Mr. Hale, the philologist, are replete with interest to the anthropologist, as he describes and figures the various negro tribes brought as slaves to Brazil; these differ in cranial conformation and in character far more widely than is generally supposed, some having but little of the distinctive peculiarities of the negro race, whilst others possess them in the highest degree. As it is impossible to give an analysis of this interesting subject,

though we should like to transfer it to our pages, we must refer our readers to the work itself.

Notwithstanding the heat of the climate and the excesses of the seamen, the general health of the squadron did not suffer during their stay at Rio. In nothing, perhaps, has hygiene more improved during the last century, than in the regulations now adopted by all maritime nations in the outfit and attention to the health of seamen. Previous to the time of Captain Cook, the loss of seamen during a long voyage, by disease, was far greater than in the most bloody engagement; any one referring to the voyages of Anson and others, will find that in almost every instance, from one-half to two-thirds of the crews were disabled by scurvy and other diseases, in passages that are now made without the loss of a man, except from casualties; indeed, from the investigations we have made on the subject, we are satisfied that the chances of life among seamen are far higher on board a well-regulated ship on a long voyage, than on shore.

We shall not follow the narrative in its details, however interesting they may be, as our limits forbid so extended a notice, but shall content ourselves with noting such observations as more directly bear on our department.

Captain Wilkes confirms the statement of recent travelers as to the stature of the Patagonians, that, although it is above that of Europeans, it is by no means so much so as asserted by Bougainville, Dampier, and others. It is a remarkable fact, that while these people are well formed and tall, that their immediate neighbours, the inhabitants of Terra del Fuego, should be so diminutive and ill shaped.

No fact connected with the history of man is more striking than the diminution and gradual extinction of the savage races, from the moment they become influenced by civilized nations; this, which is amply exemplified in our own country, seems to hold good in all parts of the world. Thus, from a census taken in Tahiti, it would appear that at the time the expedition visited that island, the population was 9000, and of Eimeo 1000. "When," as is observed by Captain Wilkes, "this is compared with the estimates of the navigators who first visited these islands, an enormous decrease would appear to have taken place."

Allowing with our author that the first estimates were too high, still the decrease is enormous, and cannot be accounted for except in part, by the introduction of new diseases, though there can be no doubt that these materially added to the mortality; whatever the cause, it would seem that the transition from the savage to the civilized or rather semi-civilized state is always accompanied with a great increase of mortality. According to the missionaries at Tahiti, for the last thirty years, the population has remained stationary, the births and deaths being nearly equal, and yet from the great diminution of deaths by infanticide, so universal at the time of the discovery, we ought to expect a visible increase in the population. The other semi-civilized islands in the Pacific evidence a still greater diminution in their population than those under consideration, as will presently be shown. This extinction of savage races has been attempted to be accounted for by the introduction of ardent spirits and syphilis; as regards the former, there can be no doubt of its evil influence, but on the other hand, the inhabitants of many of the islands in the South Sea were in the habitual use of a far more deleterious stimulant than ardent spirits, before their acquaintance with Europeans, and yet their population was on the increase, and, as respects syphilis, although it was widely disseminated among them, still it appears to be far milder in its symptoms than among the white nations.

It does not appear from this narrative that the Tahitians are subject to any peculiar diseases, but this is not the case with the inhabitants of the Samoan group. Captain Wilkes says, "among the diseases which afflict adults, one of the most usual is a spinal affection, which results in caries and produces humpback. This is no doubt owing to the peculiar manner in which the children are carried." "There is an eruptive complaint, called ilamea, which covers many of the children under the age of ten years with sores, and which seems more particularly to attack the face and head." Elephantiasis and ophthalmia are also very prevalent. Fevers are rare, and syphilis is hardly known. The principal curative means employed by the natives in the treatment of disease is a kind of shampooing.

The account of New South Wales and of the Antarctic cruise, though possessing,

more especially the latter, (in which Captain Wilkes had the glory of discovering the long-looked for Antarctic continent,) extreme interest to general readers, afford nothing for us to notice relative to medical science.

New Zealand, which was next visited by the expedition, would appear to be liable to the same diseases as this country. Thus it is stated,

" Warm days are often succeeded by cold nights, which give rise to pectoral diseases among the natives, many of whom are affected by phthisis or swept off by rapid consumptions. They are also liable to rheumatism and palsy." "Measles, hooping-cough and other epidemics have been introduced from foreign vessels: while we lay at the Bay of Islands, the influenza prevailed on shore and was communicated to our crew."

These facts possess much interest, as they show that certain complaints, which of late have been supposed to be non-contagious, are in reality communicable; for if pertussis and rubeola are not contagious, how is it possible that they could be communicated to a people among whom they were formerly unknown? It is to be lamented that we have not further and more definite accounts of the diseases of savage nations, and of the first appearance of certain epidemics among them, as nothing would more completely settle the mooted point of contagion than such data; hitherto we have had nothing but incidental notices, similar to that quoted above, which leaves the matter still liable to dispute.

At Tongataboo, Capt. Wilkes is of opinion that the climate is not salubrious, in consequence of the rapid transitions of temperature; the diseases are such as might be expected, influenza, catarrh, and phthisis, fevers, &c., though he states, judging from the number of old persons, longevity is by no means uncommon. The venereal disease not as prevalent as at Tahiti.

Among the inhabitants of the Fejee group we are told that parturition is not usually severe, and that it is a prevailing opinion that hard work renders the birth more easy. " Midwifery is a distinct profession, exercised by women in all the towns, and they are said to be very skillful, performing operations which among us are considered as surgical. Abortion is prevalent, and nearly half of those conceived are supposed to be destroyed in this manner, usually by the command of the father, at whose instance the wife takes herbs, which are known to produce this effect. If this do not succeed, the accoucheur is employed to strangle the child and bring it forth dead. A child is rubbed with turmeric as soon as it is born, which they consider strengthening. Girls reach puberty when about fourteen years old, and boys when from seventeen to eighteen."

We have a much fuller account of the diseases prevalent in this group than of any other country visited by the expedition, drawn up from notes of Dr. Fox, the acting surgeon of the Vincennes. He states that rheumatism is very common, especially among the women, and is treated by deep incisions over the affected part. Dysentery never prevails as an epidemic, though sporadic cases occur. The disease of the spine, noticed as so common in the Hawaiian group, was quite rare here. Phthisis pulmonalis and fevers were almost unknown, and ophthalmia is less frequent than in the other groups of islands. Syphilis also was not met with; ulcers are frequent. Influenza appears as an epidemic, and is supposed by the natives to have been introduced by the whites; it is often very fatal: in one of its visitations, one-tenth of the natives are said to have fallen victims to it.

" The most remarkable disease, and one that is believed to be peculiar to this group of islands, is what the natives call the 'dthoke.' It somewhat resembles the yaws of the West Indies, so common among the negroes. In adults who are afflicted with it, it assumes the form of secondary syphilis, and those unacquainted with the history of the disease, would unhesitatingly pronounce it a syphilitic taint. It usually attacks children from two to nine years of age, and according to the natives and white men's experience, none escape. Dr. Fox is of the same opinion; every child of ten years of age that fell under his observation, had had this disease, and in many cases still had it.

" Its first symptoms are fretfulness and inactivity on the part of the child; a swelling of the fingers and pains in the bones follow; these pains, which are rheumatic in character, continue at intervals throughout the disease, and are followed by small red spots in different parts of the body. These become round pustules, varying in size, and result in ulcers. After the eruption has appeared, the pains

about the bones cease to be so general. Sometimes they disappear in fine weather, but return when it is damp and wet. In other cases, they lose the fugitive character, but have a constant fixed pain over the same bone, which is not relieved until the integuments inflame and the carious bones find exit. In the first attack there is much irritation, particularly at night, and more or less fever. This also disappears in most cases as soon as the eruption is out. The mouth, arms, and umbilic ulcerate around the whole circumference." "In adults the pericranium is oftener affected than in children, the bone is denuded, and frequently pieces of the table of the skull come away. In some cases the eruption does not appear, or after appearing, immediately dries up. These cases are said to be invariably fatal. Cases are by no means rare of the loss of the bones of the palate and nose. This disease varies in duration from nine months to three years. The natives say that this disease has always prevailed among them, and always speak of it as a Feejee disease."

For this disease Dr. Fox states, they have several remedies, the most effectual of which are incisions over the painful part. To the ulcers no applications are made, except in the case of children, in whom they are scraped down with a shell and then rubbed with soot, which causes a rapid cicatization. The general belief is that the complaint will run its course, but that it is aggravated by certain articles of diet, as pork, or sweet things. Dr. Fox treated several patients for this disease with sarsaparilla, and the application of *ung. citrin* with great success.

There is also another cutaneous disease prevalent among the inhabitants of some of the groups of islands in the Pacific, especially in the Kingsmill, known by the natives under the name of "gune." This at its commencement somewhat resembles ringworm, the spots gradually spread, and others form until the whole body becomes covered with them; when they pass off, the skin is left seamed with lines and circles of a livid hue, which continue during life. "At other times it assumes a more virulent character, in which case, large excrescences like warts form, first on the face, or between the fingers and toes, and then on other parts. The softer portions of the face and body swell to double their natural size; the person becomes unable to walk, or to move his limbs, until death at length overtakes and releases him from his sufferings."

In the Kingsmill group, the practice of infanticide prevails to a great extent, but not to the same degree as among the Feejee islanders. Captain Wilkes says: "A woman has seldom more than two and never more than three living children. After the birth of a third, they consider it necessary to prevent the increase of their families, and resort to that most unnatural means, a systematic abortion. So soon as a woman believes herself *enceinte* for the third or fourth time, she determines that the offspring shall not survive, and calls in the aid of an experienced midwife to destroy it, who effects the purpose by external pressure on the abdomen or back, and, though not unattended with much pain and difficulty to the mother, the operation rarely proves fatal. This practice is looked upon without any sort of horror or shame, being considered as a necessary and proper means to prevent their families from becoming so large as to be a burden to them, and not because the island might become overpeopled, for this latter idea does not seem ever to have occurred to them. The practice of destroying the fetus is universal among the unmarried females, but children are never destroyed after birth."

It would appear that the practice of the profession among the natives of Oregon is by no means a safe one, as our author states that although they have great dread of their medicine men, and even of their remains after death, they frequently make the doctors pay the forfeit of their own lives, if they are not successful in curing their patients; and they also extend this *lex talionis* to whites who may prescribe for Indians, where their prescriptions are of no benefit. If this custom should continue to prevail in Oregon, medicine men will not be as plentiful as on this side the Rocky Mountains, nor will the profession be so overstocked.

Among these tribes also several customs are noticed which would seem to have been almost universal with our Aborigines. Thus, Captain Wilkes observes: "The customs of the Indians, in relation to the treatment of females, are singu-

lar. On the first appearance of the menses, they are furnished with provisions, and sent into the woods, to remain concealed for two days; for they have a superstition, that if a man should be seen or met with during that time, death will be the consequence. At the end of the second day, the woman is permitted to return to the lodge, when she is placed in a hut just large enough for her to lie in at full length, in which she is compelled to remain for twenty days, cut off from all communication with her friends, and is obliged to hide her face at the appearance of a man. After this she is required to perform repeated ablutions before she can resume her place in the family. At every return, the women go into seclusion for two or three days."

It is strange that a superstitious feeling with regard to the menstrual discharge, should have been universal among all nations; we find it noticed in the earliest records of the human race, and always in the same manner; being considered as something noxious, and as exercising a baneful influence on the male sex. The seclusion of the female during the continuance of her monthly discharge was as strictly enjoined by the Mosaic law, as by those of the Egyptians, or other nations of the old continent; and we find that the same regulation existed throughout the savage tribes of America. An investigation of this subject, if productive of no absolute benefit, would be extremely interesting; there must have been some cause for this universal dread of what is now looked upon as a salutary exertion and one essential to the health of the female.

The last extract we shall make is an account of a singular custom among the Nez Percés, as showing the wonderful power of the stomach in resisting the most powerful irritations. To enable themselves to endure fatigue, they prepare themselves as follows: "On the first day three or four willow sticks, eighteen inches in length, are thrust down the throat to induce vomiting; a hole is then prepared of a sufficient depth for a man to sit upright, with his head above the ground. On the second day, other sticks of an eighth of an inch in diameter, and of a length to reach from the mouth to the umbilicus, are passed down, and this process is continued until a burning sensation is produced in the stomach, the number of the sticks being diminished as the throat becomes sore; after this the patient plunges into cold water and remains there until evening, when he takes half a pint of porridge. On the third day he undergoes the same process. During the next four days he alternately takes hot and cold baths, eating very sparingly. This trying operation is commenced at the age of eighteen and is continued annually until about forty. The most remarkable circumstance is, that it would appear that this treatment is efficacious, and that instead of destroying those subjected to it, they are remarkable for their bodily powers." In these days of quackery, it will doubtless be adopted among us, and have as many followers as animal magnetism, hydrosudopathy or other modes of filling the pockets of the charlatan at the expense of his dupes.

We must now take our leave of these agreeable and instructive volumes, which will amply repay the reader, by the variety and importance of the information they contain,—narrated in a clear and unambitious style. The elegance with which they are got up both as regards their typography and their numerous illustrations, far excels any thing that has yet issued from the American press, and reflects infinite credit on the country. We look with much interest for the reports of the scientific corps, trusting that they will soon be laid before the public, in an equally magnificent manner.

ART. XIV.—*An Essay on the Philosophy of Medical Science.* By ELISHA BARTLETT, M. D., Professor of the Theory and Practice of Medicine in the University of Maryland. Philadelphia: Lea & Blanchard, 1844: 8vo., pp. 310.

ESSAYS on the philosophy of Medical Science are as valuable now as they have been in earlier periods of the history of medicine. Notwithstanding many discoveries, and although the means of exploration and the number of medical agents are being constantly increased by them, we have still to lament that a

blind empiricism prevails very widely, and that a considerable portion of the community seek for relief from disease and suffering from popular nostrums, and at the hands of practitioners who know not, and who, in their ignorance, despise the beaten paths of science and of art. In view of these facts, it is customary to dwell at large on the credulity of human nature and its love of the marvelous, and we must admit, that all this is concerned with the state of things to be deplored. Other causes however, such as the imperfections of our art, and the mistakes of its professors, are more profitable subjects for consideration, inasmuch as we have more control over them, and if we but learn how to proceed, we can labour to remove them.

Dr. Bartlett's book, then, seems to us to have been published very opportunely. He professes to discuss the imperfections of our science, which are attributable to an erroneous method employed by those who have sought to advance it. His reputation as an experienced practitioner and teacher of medicine, gives us assurance that his views must be those of a practical man, and that his opinions will not be crude, nor his ideas hastily thrown together.

That all physical science consists in ascertained facts, phenomena or events, the whole classified and arranged, is the first proposition maintained by Dr. Bartlett. He very properly begins with physical science and devotes to it the first part of his essay. What is true of physical science in general, must be true also of medical science, and the proper method of pursuing them both must be the same. One unacquainted with the history of medicine, might doubt the necessity of writing a treatise, the main object of which, is to illustrate and defend so obvious a truth as is contained in the above proposition, and yet it is undeniable, that practically, medical men have wandered widely from the course in which respect for that truth would have compelled them to proceed. Instead of using those faculties of observation which were given man to enable him to find out the laws which govern the universe, so called philosophers have been in the habit at all periods, of resorting to other faculties, and calling fancy and imagination to their aid, and of displaying their ingenuity in the invention of processes and mechanical contrivances. Physiologists have given us any number of hypotheses, and have set forth at great length, and with great complacency, how all the functions of the economy can be carried on and sustained, and have not even stopped, where they were obliged to confess their ignorance of the structure of important organs. The powers of imagination, and the ingenuity displayed by pathologists in their expedients for producing the phenomena of disease are equally remarkable. How many and how various the hypotheses, according to which, the phenomena of continued fever may be produced! Creation, after all, would not be so wonderful an exercise of power, if we could believe that all the processes of the economy, in health, and in disease, could be carried on in such numerous and various ways as are described in the writings of physiologists and pathologists. It is surprising that so many people die in spite of the many and infallible remedies, the efficacy of which is vouched for by witnesses so positive and so confident. It is often told of Newton, that he once spoke of himself as a child gathering a few pebbles on the shore of the great ocean of truth, and we could wish that such humility characterized more frequently the writings of scientific men. There are some writers, who have even gone so far as to maintain that observation is but an inferior exercise of the intellectual powers, and they attempt to describe a mode of reasoning out truth, which they hold up as nobler and higher than the patient and continued endeavour to look into life as it is. It is related of John Hunter, that he was once seen by his servant, standing for hours over a subject, without change of posture, a scalpel in one hand, pressing on the body, and lost in thought, in an endeavour to understand the mechanism of certain organs which he had been examining. Such an earnest gazing at truth cannot be a favourite method with the writers to whom we have alluded. With them, imagination leaps at results and devises processes by a sort of inspiration, with infinitely less labour. Such men evidently aspire to the possession of creative powers, and seem to have listened to the suggestion made by the great enemy of man to our first parents, "Ye shall be as gods." They scorn patient labour, and certainly can possess none of that humility and reverence for which all successful seekers after truth have been remarkable. Surely, we need hardly apologize

gize for thus glancing at the obliquity of man's moral nature as an obstacle to the advancement of truth, for how can we otherwise account for the many instances in medical works, of an obstinacy that will not see the right, and of a deliberate preference for error and falsehood. Some statement of this kind is the more necessary, because there are writers who attribute to all advocates of the use of numbers in medical science, an opinion that the numerical system is a sort of machine which is to set all things right, by the use of which error and mistake become impossible, the necessity for intellectual exertion is removed, and no occasion is offered for the exercise of the higher faculties of our nature. We will not deny that there are some who have written on the subject so as to lay themselves open to such a charge, but Dr. Bartlett cannot be placed in their number.

In his essay, the numerical system is spoken of as an instrument to aid in the pursuit of truth—the use of which is to be learnt only by the study and persevering employment of the higher faculties; and which, in the hands of the ignorant, the incapable and the dishonest, may mislead and deceive only the more from the appearance of exactness borne on the face of its results. And what Dr. Bartlett has said on this subject, would have made more impression on certain minds, had he recognized more clearly the existence of intuitive powers, by which truth is often discerned, sometimes dimly and at a distance, before it can be shown to others, in such a way as to produce conviction. Sir Isaac Newton, in his meditation on the fall of the apple, saw the principle of gravitation, and, as it were, partly by its light, worked out laws and principles which were more fully developed to the world in the Principia. We certainly believe that in medicine such a course has not been unfrequent. In our own day, for instance, the incident and reflex actions of the nervous system have been fully set forth by Dr. Marshall Hall, though their existence was recognized by Whytt and other earlier observers. The connection of pericarditis with rheumatism was noticed in the latter part of the last century, but a great deal has been done within a few years to throw light on the subject and to give certainty to our knowledge. John Hunter seems to have had glimpses of many truths which have been established and demonstrated by subsequent observers. This faculty, however, of discerning the truth is comparatively a rare gift. Most of us must be content to arrive at truth by a more circuitous and less direct route. In fact, there are few who are not more or less in danger of mistaking what they imagine for what they see, and of reporting to others as facts the fictions of their fancy. Mental obliquity is not a very rare disease, nor is a perfectly achromatic mental lens at the service of every man. The process of generalization is not safe for the many who endeavour to use it. A writer in a recent number of a popular review on the subject of education, who claims only to re-collect and re-present old truths, says, "that many people seem to think that all knowledge consists in acquiring and using certain abstract ideas, which, after all, is no knowledge at all, for God and nature gave us no such things to study. They are but the spider's web of our own brain." We cannot go far in the history of medicine without finding confirmation of the justice of this remark. Cullen and Brown certainly were men of no ordinary intellectual powers, and yet must not their theories of fever be considered as abstract ideas which existed only in their own minds, and which, having been mistaken for the truth, have exercised a pernicious influence on the practice of medical men? Broussais, in his later years, with his abstract ideas of irritation and inflammation, which were the cause of such a profuse expenditure of blood, affords another example, and Dr. Bartlett very properly dwells on his history at some length. The theories of Gallup and Miner and Thompson, and those of the disciples of Hahnemann are instances in our own country of a generalization resulting in abstract ideas of disease to the infinite prejudice of patients. Now will any question the utility of dwelling on mistakes which have been and are so frequently committed? Shall there not be, as it were, charts of medical science, on which shall be marked distinctly the rocks and quicksands that have been fatal to many a voyager? We may regard Dr. Bartlett's essay in this light—all the branches of medical science, anatomy, chemistry, physiology, pathology, therapeutics are reviewed by him, and he endeavours to show their connection and how far one branch may be said to be founded on another. Two chapters are devoted to diagnosis, one chapter is taken up with a discussion of the principles of classification

of diseases, and in the concluding chapter are discussed the future prospects of medical science, the probable extent of our power over disease, the American French and English schools of observation. It is apparent even from so brief and imperfect a statement of the contents of Dr. Bartlett's book, how much ground he goes over. It is not our purpose to follow him, nor to criticise minutely the views and opinions advanced by him. To do this, and to be just to the subject and the author, would not be possible in the prescribed limits. We can only imitate the traveler, who, after the completion of his tour, commits to writing some of the impressions produced on his own mind, with the thoughts suggested to him by the scenes and circumstances amongst which he has been thrown. Our readers may perhaps judge in this way as easily, whether it be worth their while to go over the same ground as after a more elaborate description. Of course, all will not find that Dr. Bartlett has surveyed the field of medical science from their own favourite points of view. His volume is but an octavo of some three hundred pages, and such a subject as the philosophy of medical science cannot be exhausted in that space. Yet whatever faults of omission or commission may be detected by the critical reader, we are persuaded that no man of an honest or candid mind will regret the time spent in making himself acquainted with the author's views. No one can proceed far in the perusal of the work without being convinced that the writer has thought much and well, and has expressed himself clearly and forcibly. The book is a credit to the medical literature of our country, and for the sake of the profession we hope that it will meet with a wide circulation.

G. C. S.

ART. XV.—*General Report of the Royal Hospitals of Bridewell and Bethlem, and of the House of Occupations, for the year ending 31st December, 1844.* London, 1845: pp. 112.

DURING the last few years the Bethlem Hospital for the Insane has made gigantic strides in the way of improvement. It now undoubtedly deserves to be classed among the very best of pauper institutions for the treatment of mental disorders. The extended notice which we gave of the report for 1843 precludes the necessity of entering at length into the details of that which is now before us. The following table includes the most important statistics for the year:

	CURABLES.			INCURABLES.			CRIMINALS.			TOTALS.				
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.		
In hospital January 1st, 1844,	-	72	109	181	34	50	84	70	20	90	176	179	355	
Admitted during the year,	-	-	118	163	236	5	3	8	10	1	11	133	172	305
Whole number,	-	-	190	277	467	39	53	92	80	21	101	309	351	600
Discharged cured,	-	-	58	70	128	0	0	0	2	2	4	60	72	132
Died,	-	-	6	13	19	1	3	4	5	0	5	12	16	28
Remaining December 31st, 1844,	-	77	114	191	37	50	87	73	19	92	187	183	370	
Patients admitted during 100 years, ending Dec. 31st, 1843, 17,803.														
" discharged cured,	"	"	"	"	"	"	"	"	"	7,108, or 39·86 pr. ct.				
" died,	"	"	"	"	"	"	"	"	"	1,799, or 10·10 pr. ct.				
Curable cases admitted during the last 25 years,	-									Males.	Females.	Totals.		
" cured	"	"	"	"	"	"	-			2,180	3,221	5,408		
" died	"	"	"	"	"	"	-			1,021	1,715	2,736		
Per centum of cures,	-	-	-	-	-	-	-			132	146	278		
" of deaths,	-	-	-	-	-	-	-			6·05	4·52	5·12		

Hence it appears that the recoveries, *in cases considered as curable*, was a fraction more than 50 per cent. The question is often asked, whether the patients of one sex are more curable than those of the other? The cures of females, according to this table, exceeded those of males by 6·29 per cent.

The facilities for the moral treatment of the patients at Bethlem have been increased, and a regular system of labour is so far introduced that about *two-thirds* of the patients are constantly employed.

"Personal restraint," says the report, "has been reduced to one-tenth of what it was six years ago; and it is most gratifying to be able to state, that it has been reduced during this year to one-half of what it was in 1843."

"It is almost unnecessary to say that restraint has diminished just as the means of occupation and amusement have been increased, and that without such means and appliances it would be injudicious to attempt to dispense with mechanical restraint."

In the diminution of restraining apparatus to the minimum required by true philanthropy; in the establishment of a system of regular manual labour; and last, though perhaps least, in the publication of an elaborate report in a style indicative of the perfection of art, the government of Bethlem hospital has set an example which, it is to be hoped, will be followed by those concerned in the management of other kindred institutions.

P. E.

ART. XVI.—*Vital Chemistry.—Lectures on Animal Heat.* By THOMAS SPENCER, M.D., Professor of the Institutes and Practice of Medicine in the Medical Institute of Geneva College. 12mo, pp. 114. Geneva, 1845.

SINCE the attention of physiologists has been directed to the subject of vital chemistry, and its agency in the production of the phenomena of organic life, by the promulgation of the ingenious, and from their simplicity and apparent truthfulness, very captivating theories of Liebig, we have been presented with several publications, in which attempts are made to explain, upon purely chemical principles, the functions of digestion, chylosis, hæmatosis, and nutrition.

The examination of the laws and products of vital chemistry is unquestionably calculated to lead to very important results, provided it be conducted in a right spirit, and with a constant recollection that the changes, whether of composition or decomposition, which take place in the living organism, although governed by strictly chemical laws, are nevertheless under the control of life, in whatever we may suppose this latter to consist; and that, although chemical changes act a very important part in the production of the organic phenomena, they are not the sole cause of these phenomena, and are, to a very great degree, directed and controlled by the vitality of the organism; and hence, that the laws and results of vital chemistry are to be studied, not in the laboratory, but in the living body alone.

The work of Dr. Spencer, the object of which is to investigate the vital chemistry of respiration and hæmatosis generally, with a view to determine the source of animal heat, is one deserving of a close study. His manner of investigating the subject is perfectly logical, so that, admitting the accuracy of his premises, most of his conclusions necessarily follow. We have only to regret that he has been urged into a somewhat hasty publication of his views; that he has not taken time to elaborate them more fully, to fortify, with more numerous facts and illustrations, his several positions, and to fill up and complete the mere sketch which he has now presented. He would, in this manner, have done greater justice to himself, and succeeded more fully in convincing his readers of the truth of his views.

To give a general idea of Dr. Spencer's theory of animal heat, we present his conclusions, as drawn up by himself.

"The following summary may be presented of the reciprocal chemical changes of the blood in the capillaries of the lungs and system, and the connection of respiration with calorification:

"1. The lungs perform an excretal office, on which life constantly depends, because directly and indirectly aiding calorification.

"2. The substance thrown off is hydrate of carbon.

"3. The carbon, on coming in contact with atmospheric oxygen, combines with

it, forming carbonic acid gas, which is thrown off from the lungs and skin by expiration and perspiration.

" 4. The amount of latent heat of the oxygen gas employed, is much greater than that of the carbonic acid gas formed in the lungs, and hence, caloric is set free, imparting heat to the blood and surface.

" 5. This free heat also combines with the water of the hydrate of carbon, and converts it into vapour.

" 6. The lungs and cutaneous surface aid in *regulating animal temperature* by the conversion of water into vapour, thus conveying off any excess of free caloric in the system by combining with it in the form of latent heat.

" 7. The water of the hydrate of carbon is converted into vapour in the lungs and upon the surface, precisely as when wood is burned, and hence assumes the form of insensible respiratory and perspiratory transpiration.

" 8. Facts appear to show that the chemical change in both venous and arterial blood may occur, independent of the vital principles, by applying to the venous, oxygen gas, and to the arterial, carbonic acid gas.

" 9. The systemic red capillaries are the antagonists of the pulmonary, and are constantly decomposing carbonic acid, and with water forming hydrate of carbon; or, in other words, carbonizing the blood.

" 10. From this union, water and carbonic acid are transformed into a solid substance, and hence, latent, becomes free heat, at every point where red blood circulates.

" 11. The functions of the systemic red capillaries of the body in *decomposing*, and that of the small vessels of the lungs and skin in *recomposing* carbonic acid gas, reciprocally depend upon, and *balance* each other; in other words, one set *carbonizes*, the other *decarbonizes* the blood.

" 12. In consequence of the indissoluble link which connects the functions of respiration and calorification, the degree of temperature, the carbonic acid evolved, and the size of the lungs as compared with the bodies of animals, always bear a direct ratio to each other.

" 13. There is a beautiful analogy between animals and vegetables, in the decomposition of carbonic acid by the minute vessels of each.

" 14. This explanation shows that the great end and function of respiration is, both *directly* and *indirectly*, to aid in the all-important office of the generation and diffusion of animal heat."

The theory of respiration adopted by Dr. Spencer differs, as he remarks, essentially from that of Lavoisier, Laplace and Prout, which supposes carbon and hydrogen, or hydro-carbon, to exist in the blood, and that both become oxidized by respiration. " Hydro-carbon is a mere imaginary compound, which was necessary to complete their theory, while hydrate of carbon, as the author has shown, is an extensive triple compound."

According to Dr. Spencer, "the lungs are not only employed in the functions of *excretion* and *calorification*, in expelling and oxidizing the carbon of the hydrate of carbon, but are the last of the organs of *haematosis*, viz:

" 1. In decarbonizing the chylous and other constituents of blood, thus fitting them for nutrition.

" 2. This decarbonization of the elements originally entering the animal as food, furnishes the carbon of carbonic acid, and the hydrate of carbon employed in the function of calorification.

" 3. That the oxides of iron are the first instruments for oxidizing and deoxidizing carbon as the important agent in calorification, while atmospheric oxygen is the last agent.

" 4. The protoxide of iron is the carrier of the carbonic acid from the lungs to the systemic capillaries.

" 5. The affinities of the iron in its circle for calorification show, that if either oxide exists as a constituent of blood, the other oxide must necessarily be formed; the *pulmonic* and *systemic* capillaries antagonizing and balancing each other, in oxidizing and deoxidizing these compounds.

" 6. The iron of the blood is originally derived from vegetables in the form of oxide of iron.

"7. This oxide of iron is converted into perchloride of iron by the muriatic acid of the gastric juice, and thus rendered soluble.

"8. The perchloride of iron is reconverted, in the lungs, into the hydrated peroxide of iron by the free soda of the blood.

"9. The hydrated peroxide is converted into the protoxide in the lungs, by oxidizing the carbon of the nutritious fluids.

"10. The protoxide carries carbonic acid thus formed to the systemic capillaries for calorification, and is there reconverted into hydrated peroxide.

"11. In the series of chemical compositions and decompositions of iron and carbon as explained, an exact balance is preserved in the amount of each at all points of the organism, where employed for calorification.

"12. The oxides of iron are, *probably*, employed in *oxidizing* and *deoxidizing* various other compounds than those already considered.

"13. In deoxidizing sugar, &c., to form animal fat, and in oxidizing the carbon of the fat for calorification."

The foregoing propositions present a general view of the doctrines of our author in relation to respiration and calorification; they press themselves upon the attention of the physiologist by their simplicity and apparent strict accordance with numerous well established facts in relation to the chemical constitution of the components of the animal organism, and demand a cautious and candid examination on the part of all who have the time and talents required to test their accuracy. If, as the author very candidly remarks, every step of his inquiry shall be found to be fortified by ascertained facts, and his deductions to have been legitimately drawn, he has succeeded in pointing out and determining "a circle of vital affinities, uniting all the structures and functions of the organism, and making each set of capillaries mutually dependent on, and balanced by others, in the chemico-vital changes produced in their passing currents of blood." "That such a series exists," he adds, "and that the links in the chain may be demonstrated, cannot be doubted; but in view of the intricacy of the subject, and of my limited knowledge of experimental chemistry, a due distrust is still felt in the accuracy of the attempted determination."

Besides the main subjects referred to in the summary we have given of Dr. Spencer's lectures, they contain a number of interesting suggestions on many interesting questions connected with the physiology of assimilation and nutrition.

D. F. C.

ART. XVII.—*Summary of the Transactions of the College of Physicians of Philadelphia, from November, 1844, to March, 1845:* 8vo. pp. 70.

THE publication before us embraces a summary of the Transactions of the Philadelphia College of Physicians for five months, and contains a very considerable amount of interesting matter. It comprises the annual reports on surgery, on meteorology and epidemics, and on the diseases of children, besides several instructive cases communicated to the college, and a well drawn up biographical memoir of the late Dr. J. C. Otto.

The annual report on surgery by Dr. Parrish, though not presenting, as might be expected, a summary of the improvements in surgery during the preceding year, still furnishes some exceedingly interesting information. The chief topic of the report is the subject of the accidents resulting from the riots in Kensington and Southwark, in May and June of last year.

Fourteen of the cases wounded in the above riots were admitted into the Pennsylvania Hospital; and the following table furnished by Dr. Logan gives some interesting details respecting these cases.

Date of admission.	Name.	Age.	Nature of wound.	Date of death.	Date of discharge.	REMARKS.
May 6	Joseph Cox	24	Gunshot of abdomen	May 21		The ball (apparently from a pistol) entered the left groin, and was found after death, loose in the cavity of the pelvis, having traversed the viscera without any apparent wound. Died of peritonitis.
May 7	John Fagan	23	Gunshot of shoulder		June 19, cured	The ball (rifle) entered the top of the left shoulder, penetrated the supra spinatus and infra spinatus muscles, the spine of the scapula, and came out below its inferior edge. After he left the hospital, a considerable number of spiculae of bone were discharged.
May 7	John McAleer	35	Gunshot of thumb		May 9, by the public authorities	The thumb was carried away by a ball. The first phalanx was fractured and afterwards removed.
July 7	Jas. Linsenbigler	19	Gunshot of abdomen	July 8		The ball (of a large size) entered the right groin, and passed out at the ischiatic foramen of the opposite side. He never fairly reacted.
July 7	Thos. Saunders	19	Gunshot of chest	July 9		The ball (musket) entered the chest, one and half inches inside and above the left nipple. It was extracted two inches to the left of the spine, and one inch above the inferior extremity of the scapula. Complete reaction took place two hours after his admission into the hospital. No <i>post-mortem</i> examination was made.
July 7	David Kitheart	19	Gunshot of abdomen	July 10		The ball (of a large size) entered three inches to the left of the umbilicus, and passed out at the same distance to the right. There was a protrusion of several feet of the small intestines. The wound was dilated and the intestines returned. He died of peritonitis.
July 7	James Barr	18	Gunshot of arm		Aug. 2, cured	This was a mere flesh wound, most probably from a musket ball.
July 7	John Huested	23	Gunshot of arm		Aug. 2, cured	This also was a mere flesh wound.
July 7	James Tully	36	Gunshot of forearm		Sept. 14	This was a flesh wound from a large ball. The cure was retarded by the inflammation extending down the fascia of the forearm.
July 7	Hen. Troutman	30	Gunshot of groin	July 8		The slug entered the left groin, severing the femoral vessels, and passed out at the ischiatic foramen. He never reacted.
July 8	Elijah Jester	32	Gunshot of chest	July 12		The slug entered the left side of the chest, fracturing the second rib, close by the sternum, penetrated the upper portion of the lung, and lodged in the cavity of the chest.
July 7	Jas. Crawford	18	Gunshot fracture of the head of humerus		Aug. 20, cured by amputation	The bone was shattered by a canister or grape shot. The arm was amputated at the joint.
July 8	Edward Lyon	25	Gunshot of arm	July 24		The slug entered the front of the arm, passed through the axilla, inside of the vessels, (they being thrown out by the raised position of the arm,) and was extracted outside of the external edge of the scapula. He died from absorption of pus, his lungs being covered with metastatic abscesses.
July 7	Wm. Manning	19	Gunshot fracture of femur		Remains under treatment	The ball (musket) passed through the right thigh without fracturing the bone, entered the left, and made a comminuted fracture of the os femoris. The ball was completely flattened against the bone, being afterwards extracted. He is now doing well, and has every prospect of having a good serviceable limb.

But one of the cases, it will be observed, in the preceding table, required amputation, and that was successful. "The urgent necessity," Dr. Parrish ob-

serves, "for immediate amputation after the establishment of reaction, in all cases of severe gunshot wounds of the limbs, attended with comminuted fracture of the bones, especially where joints are involved, is warmly advocated by the most authoritative writers on military Surgery. In the case of Crawford, there was a comminuted fracture of the neck and head of the humerus, requiring amputation at the shoulder-joint. The operation was performed by Dr. Norris about two hours after his admission, and fifteen hours after the reception of the injury! The result was as stated, and the patient was discharged, cured, on the 20th of August.

"In the case of William Manning, an attempt was made to save the limb, contrary to the generally received doctrine in such cases. The result is particularly interesting, as forming an exception to a general rule. All agree that gunshot fractures of the thigh are attended with great danger, and are, in the larger proportion of cases, fatal; and that the necessity for immediate amputation is imperative. On this point, the following strong remark is made by Guthrie:—'Upon a review of the many cases which I have seen, I do not believe that more than one-sixth recovered, so as to have useful limbs; two-thirds of the whole died either with or without amputation, and the limbs of the remaining sixth were not only nearly useless, but a cause of much uneasiness to them for the remainder of their lives.' This opinion is confirmed by Hennen, who asserts that, without having made any accurate calculations, he is strongly inclined to assume Mr. Guthrie's estimate as correct; 'even including the cases of officers, who are not subjected to the risks encountered in crowded hospitals; in these situations, says he, the cases which I have witnessed have, on some occasions, been deplorable. Not a single case has done well where amputation was deferred, and even where it was performed, two out of three have died. In other instances, the losses have not been so severe; but I have never known a larger proportion saved than that assigned by Mr. Guthrie.' (*Principles*, 3d ed., p. 110, Lond.) The testimony of the French army surgeons tends to the same conclusion. Baron Percy states, that scarcely two in ten of such cases recover. Ribes, who has never seen a single cure, gives ten examples, which, despite of every possible attention, proved fatal. Dupuytren, when giving the result of his long experience in compound fracture, says—'On one point my opinion is unchangeable—on rejecting amputation in them, particularly when produced by gunshot wounds, more lives are lost than limbs saved.'

"Notwithstanding these eminent authorities, the surgeons of the hospital determined to make an effort to save Manning's limb. His youth, temperate habits, and good constitution, were all in his favour, and rendered the case more hopeful than usual. The result appears likely to meet their most sanguine anticipations, and, should he recover with a good limb, his case will furnish an important addition to our experience on this interesting subject. The result is, perhaps, mainly attributable to his youth, as it is found that nearly all the cases of recovery after compound fracture of the thigh, whether produced by ordinary accidents or by fire-arms, are in persons under age."

Several cases which occurred in the private practice of the reporter's friends, are also detailed. The following brief details are furnished by Dr. Norris:

"Among the wounded at the Kensington riots, the case of A. R. P. deserves notice, from the successful issue which followed speedy amputation. This individual received a slug wound on the evening of May 7th, while on the ground at Kensington. He was struck about the middle of the arm, the slug passing through the limb, with extensive laceration of the soft parts, and producing a frightful comminuted fracture of the humerus; the bone being splintered so far up, as to make it necessary to amputate very near to the shoulder.

"The patient, who lived in the lower part of the city, did not reach home until late at night, and about midnight Dr. Norris saw him. He found him suffering extreme pain; much exhausted from loss of blood and from abstinence, as he had not eaten any thing since morning. Amputation was immediately performed. No unpleasant symptom followed, and Dr. N. ceased his attendance in about three weeks."

The following case fell under the care of the reporter and Dr. Remington, and

is worthy of notice from the fact of the perfect restoration of a limb after a pistol shot, which penetrated the thigh, and fractured the femur just above the condyles:

"M. H., a stout muscular man, aged about 25 years, while marching in the ranks of a military company to the scene of the riots in Kensington, on the afternoon of the 8th of May, was shot by the accidental discharge of a six-barreled revolving pistol, which dropped from the belt of an officer of the company, who was marching about twenty feet in the rear of him.

"The ball, passing between the men who were marching behind the patient, struck him upon the inside of the leg, while in the act of raising the limb to make a step. It entered just opposite the head of the tibia, a little below the knee-joint, and passing obliquely upwards and outwards, it struck the os femoris, about an inch and a half above its articulating surfaces, producing an irregular fracture, with lateral deformity and slight shortening of the limb; without, however, an entire separation of the bone, throughout its whole breadth. A ragged edge of bone could be felt under the skin on the outer side of the thigh—and the patient suffered extreme pain from the least motion: no appearance of the ball could be detected.

"The treatment consisted in the application of Desault's splint, as in ordinary fracture of the femur. Tr. opii gtt. xx were directed every four hours, or oftener if the pain was severe; and a lotion of lead-water and laudanum was freely applied to the limb with wetted compresses. On the 9th, the limb was much tumefied and painful, although the patient had intervals of comfortable sleep, and was free from fever. One hundred American leeches were directed to the limb, and the lotion to be continued. On the 10th, the swelling had subsided, and the pain was less severe; he was directed a saline cathartic, and continuance of the other treatment. From this period no unusual symptom occurred, different from an ordinary case of fractured thigh.

"The parts traversed by the ball healed up without suppuration, and, at the end of two months, the patient was allowed to give slight motion to the limb. He recovered with a very slight limp, and experiences no other inconvenience at present, except that the limb is at times painful from changes in the weather. The ball has not yet been discovered. The favourable issue of this case is probably attributable, in a great measure, to the small size and smooth surface of the bullet, which is not larger than the largest sized buckshot, to the velocity with which it entered, and to the unusual thickness of the bone at this point. The patient, also, was young, of a remarkably fine constitution, and of temperate habits."

The following case furnished by Dr. Ashmead, has some points of resemblance to that just mentioned, while the result was equally gratifying:

"T. S., aged about 45 years, was wounded at the Southwark riot on the 7th of July. He was struck by a bullet on the outer and inferior edge of the patella, fracturing its lower half into four or five fragments, the upper half remaining entire. The ball wound around the head of the tibia, and came out at the edge of the popliteal space behind; then entered the internal surface of the left leg, passed through the gastrocnemii muscles, and emerged externally, without injury to the bones. The cavity of the right knee-joint was of course opened. The patient immediately fell, although he experienced no pain: there was considerable hemorrhage from the wounds.

"Dr. Ashmead saw him in about 5 hours; he immediately dressed the wounds with lint, smeared with simple cerate, and over this a poultice, avoiding most carefully, throughout the treatment, the access of air to the cavity of the knee-joint. The fractured limb was placed on a straight splint, and kept at perfect rest; and anodynes were ordered at short intervals. On the following day, the right limb was much tumefied, although without severe pain. The patient had twitchings in his sleep, tympanitis, loss of appetite, and general restlessness: and, for ten days, the danger of tetanus appeared to be imminent. During this period, opium was freely administered, with stimuli and nutriment—and the patient escaped. After this he improved rapidly, and at the end of four weeks, was able to sit up, and was allowed to give slight motion to the joint.

"When last seen, November 1st, he was found to have as free use of the limb as is usual after ordinary fracture of the patella—a firm ligamentous union having taken place between the fragments. The circuitous course of the ball, passing

around the head of the tibia, and traversing a route of four or five inches without entering the joint, was remarkable—as was the recovery of the use of the limb to its present condition, without serious inflammation and stiffening of the joint."

The following case, mentioned by Dr. Condie, exhibits a curious instance of the circuitous route occasionally taken by balls, without inflicting serious injury:

"A person (W. A., residing in Southwark) led by curiosity to visit the scene of the riots in Kensington, whilst in the vicinity of the firing by the mob, received a musket-ball in his left hip. He immediately fell, and was at once conveyed home by his friends. Dr. Condie was sent for, the messenger informing him on the road that Mr. A. had been shot through the body. On arriving at the residence of the wounded man, the doctor was surprised to find neither in the countenance, pulse, nor temperature of the patient's surface, any thing to indicate that he had just received so serious an injury. On examination, he found, directly over the great trochanter of the left femoris, a wound indicating the place of entrance of a ball, and on the left side, between the great trochanter and the anterior superior spinous process of the ileum, another wound where the ball had made its exit. The patient was able to rise up and support himself in the sitting posture without any difficulty or pain; and, on being requested, stood on his feet and walked some steps, with no other inconvenience than arose from a sense of constraint or stiffness at the hip-joints; a feeling, as he expressed it, as though he was encompassed there with an iron band. The simplest dressings were applied, and a dose of Dover's powder administered to the patient. He rested well that night, and on the ensuing morning, the nature of the injury he had received was rendered very evident by a broad red streak, extending from the two wounds around the back. The ball had passed beneath the integuments, from its place of entrance on the left side, across the posterior part of the body, to the right side, where it made its exit. The wounds were healed, and the patient was entirely well within three weeks from the date of his accident."

The report on epidemics by Dr. Moore, and that on the diseases of children by Dr. Condie, are both very interesting, but they need not detain us, the former not admitting of analysis or presenting any very prominent points for notice, and nearly all the facts embraced in the latter having already been presented to our readers in the previous numbers of this journal.

A case of remittent fever, followed by symptoms of cerebral disease of a very peculiar character, was communicated by Dr. Condie. The subject of this case was a female, 35 years of age who had been attacked with remittent fever. By appropriate treatment, on the 6th day (Oct. 6) the fever was entirely subdued; all pain had disappeared; the pulse had become of a normal frequency, and slow; somewhat full, but perfectly soft; and the skin was cool and moist; but instead of full convalescence ensuing, the patient fell into a condition marked by symptoms of a very peculiar character. She lay upon her back perfectly motionless, her limbs relaxed, her eyes and mouth wide open, and the countenance devoid of all expression. The eyes presented a perfectly natural appearance—the pupils contracted and dilated according as they were exposed to more or less light, and the adnata was free from the slightest appearance of injection; the balls were perfectly immovable. The pulse, in general, rather slow—full and soft—occasionally slightly accelerated, but never tense or contracted; it, in no instance, rose above 84, or sank below 60. There was evidently some dullness of hearing, but when spoken to in a loud tone, by persons with whose voice she was familiar, she heard and evidently understood whatever questions were put to her, to which she replied correctly by motions. When directed to move her limbs in any direction, she did so readily, but very slowly; when told to close her eyes or mouth, she strained them more widely open—and when requested to protrude her tongue, she drew it forcibly backwards; when asked if she experienced pain, she replied invariably by a negative motion of the head; but when the question was put to her whether she desired drink or food, to the first she generally replied by an affirmative nod—and to the second, occasionally by a negative motion; when fluids or food were placed first within the mouth, she made no effort to swallow, but when they were introduced far back towards the root of the tongue, fluids were swallowed at once, and without the slightest difficulty. Certain articles of diet and medicinal substances, introduced in the same manner, in place of being swal-

lowed, were pushed forwards by the action of the fauces, and the patient made motions to have such of them as were not sufficiently fluid to run out of the open mouth, removed by those around her. The face became flushed, and of a dusky red, and somewhat swollen, generally about two o'clock in the afternoon and towards eight in the evening; at other times it was pale and expressionless. The skin remained throughout all periods of the day soft and of a natural temperature; the temperature of the hands and feet, however, was uniformly and considerably diminished. The tongue slightly coated—dry, and of a dark colour in the centre, but otherwise soft and flabby, and neither unusually red nor pale. The patient was but little emaciated. Cups to the head—an active purge, followed by a pill three times a day of blue mass, ipecac. and rhubarb—sinapisms to the extremities, and a blister to back of the neck, were directed.

The report two days after states, that the patient is conscious of the calls to stool, and at such times makes motions to be assisted out of bed; and passes her urine freely. Three days subsequently, however, she lost her power of urinating, and it became necessary to empty her bladder by a catheter: a brisk purgative, infusion of valerian, sulph. quiniæ gr. ij, assafetid. gr. iiiij, every three hours, were ordered. Four days afterwards the patient regained her ability to pass her urine, and took some light nourishment, and from this time she commenced to improve, but she continued perfectly mute. On the 30th October the patient attempted to articulate words, and laughed heartily at the awkwardness of her attempts, and the mistakes she frequently made in substituting one word for another; is unable yet to utter more than single words, and those very imperfectly. From this time she improved rapidly, and on the 5th November she was able to converse fluently.

The following case of luxation of the femur into the foramen ovale, resulting from disease of the hip-joint, is interesting from the perfect cure which was effected:—

A German girl, 8 years of age, whose general health was good, received on the 13th June, 1844, a slight fall on both knees, by which both were bruised, but especially the right, which three days afterwards became swollen and painful; these symptoms disappeared, however, in a week. About the beginning of July it was observed that the patient walked rather awkwardly on going up stairs; and, by mere accident, it was noticed that one leg was somewhat longer than the other, and that one hip projected more than the other. Rest and bathing were employed for some weeks. About ten weeks from the first fall she received a second, which was also followed by severe pain in the knee. Two weeks after the second fall she received a third and severe fall on her right side, immediately followed by severe pain about the groin. She could not rise; her right ankle was also sprained.

Three weeks after this injury (Oct. 1) she was first seen by Dr. Ashmead. He found the patient lying on her back, with a thin, sallow, distressed countenance; some pain and uneasiness about the hip; no fever; sleep disturbed; bad appetite. Right foot slightly rotated outwards, and the whole limb lying off from the other (abducted) and elongated about one and a quarter to one and a half inches; incapable of flexion on pelvis; rotation, adduction, or any further abduction could not be effected without resistance and the production of pain; the limb seemed to be fixed immovably in its present position.

Anterior face of thigh, at its upper third, evidently increased in the transverse diameter, and strikingly flattened, having lost the prominent anterior rotundity of the left. At the groin there was considerable tenderness on slight pressure; and instead of the natural hollow slope, there were a general fullness and firmness, without the rounded head of the femur being distinctly felt; two elevated points, and a gently rounded fullness of the head were, however, perceptible on either side of the acetabulum, and which were supposed to indicate the position of the bone. The plane of the shaft of the femur was on a higher level, and the trochanter major more anterior, than that of the opposite limb.

On the outer face of the thigh, the parts about the trochanter major were flattened laterally, not having the lateral bulging fullness of the left side, and a deep hollow existed in place of the trochanter; this being much nearer the median line than natural.

On the internal face, the soft parts seemed to encroach upon the labia, as if a greater fullness than natural existed there.

Diagnosis.—Luxation inwards and slightly upwards into the foramen ovale, with chronic disease, and filling up of the acetabulum. The patient was in apparent health when she received the first fall, after which she complained of the knee; limb slightly elongated: fell a second time; knee worse; general health bad; limb more stiff and more elongated: third fall on side, with a twist of the foot; feeling of severe pain in the hip; inability to rise or sit up in bed, with appearances as above: hence the inference was that she laboured under coxalgia, which, slowly progressing, occasioned a filling up of the acetabulum, elongation of the ligaments of the joint, and a relaxation of the muscles; in this state a slight twist and fall on the trochanter were sufficient to displace the feebly supported head.

Prognosis.—Very doubtful if the dislocation could be reduced now without greatly aggravating the local disease; and if so, the danger was, that spontaneous luxation would very soon occur; also, the difficulty of reducing it would increase with its duration; therefore, the prognosis was, probably, permanent lameness.

Treatment.—To allay all recent irritation, and reduce, as far as practicable, the original disease, and wait as long as we prudently could before attempting its reduction. Cups were directed, every other day, about the groin and trochanter; lead-water, stramonium-leaf, and poultices; purge with calomel and jalap occasionally, and salts daily; to be allowed no meat, and kept at perfect rest.

Oct. 5th (one month since the occurrence of the luxation). Limb felt less painful. Concluded to make *very gentle* efforts at reduction, to ascertain how she would bear the irritation, in order to enable us to judge as to the propriety of waiting longer. The patient lying on her back, the right thigh was very slowly and steadily approximated to the opposite one (adducted). It was then slowly (but firmly) flexed on the pelvis, to an angle of about 35° , when it was carried rather across the opposite knee, and an attempt made to rotate the foot inwards. An assistant was directed to hold the limb in this position, and make steady, gentle extension with his hands from the knee. With the flat part of my hand, I pressed pretty firmly, downwards and backwards, on the internal and most elevated part of the groin, (supposed to be the head of the femur,) for two or three minutes. A slight yielding movement of the lump was perceptible to my hand, and I immediately desisted, as these efforts were attended with considerable pain. The thigh was then slowly extended, (keeping up the slight extension,) and placed on the bed. There were less abduction and eversion of the foot, the prominence of the groin was slightly diminished, and there was some relaxation of the tension of the soft parts about the hip. No change (on a slight inspection) appeared in the length or in the position of the trochanter. Conclusion: head removed to the lower part of the foramen ovale. Means were now taken to allay any irritation that might have been produced in the previous disease of the socket, and to enable us to judge, from the effects of this gentle effort at reduction, of the propriety of, and time suitable for, making a further and more energetic attempt. The pain from our efforts, gentle as they were, was pretty severe, and lasted for twenty-four hours. It then ceased, the patient feeling better; the groin is less swollen, and she can make slight efforts to adduct the limb. She was retained in a state of perfect rest; the knees tied in contact, and a thick compress placed high up between the thighs, from a belief that the head of the bone was now on the edge of the socket, and with the view of gradually forcing it in.

Oct. 9th.—There is evidently less abduction of the limb; the patient can slightly adduct the right knee over the left; more freedom of flexion, and motions generally more free. Treatment continued.

15th.—Much improved; trochanter more prominent.

17th.—Upper third of thigh less flat; trochanter more prominent; the plane of the femur is farther back; groin more natural in appearance; elongation only $\frac{1}{2}$ an inch; freedom of motion much greater; general health improved. Treatment continued.

22d.—General appearance of the patient much improved; her eye is bright; face fuller; appetite, sleep, pulse, tongue, and skin good; the thigh near the

groin somewhat flattened, but this is gradually disappearing; trochanter still less projecting than natural; elongation one-fourth or one-third of an inch; can place her leg over left knee; rotation of the leg internally gives some uneasiness, but the motions are pretty free; external rotation free; can flex thigh, though somewhat stiff.

24th.—Improving; strict rest of body and mind; cupping is omitted, and purging less frequent. R.—Mild iodine ointment to groin; increased diet; solut. iod. ferri, internally.

November, about the 20th.—Purging omitted; the patient sits up in bed occasionally.

December 20th.—Has been steadily and slowly improving, and now is permitted to walk about her room, very cautiously; she is a very little lame. Ointment and iod. ferri continued; diet improved. General health, sleep, and appetite very good; no uneasiness; appearance of limb perfectly natural.

1845, *January 7th*.—Medicines and ointment omitted. No pain or tenderness.

February 20th.—Walks up and down stairs, and everywhere; not the least lameness; no elongation; no pain nor tenderness; perfectly well.

March 28th.—Remains well, nearly six months after reduction.

Dr. Pepper read an account of a case of fatal peritonitis resulting from perforation of the appendicula vermiciformis. On post-mortem examination, the appendix was found to contain, at its perforated extremity, a small mass of indurated faecal matter, in one end of which was imbedded a large grape-seed; its mucous membrane was black, and in a gangrenous condition—whilst the other coats were softened and greatly thickened. The ileum, as also the caput-coli, were apparently perfectly healthy. Dr. P. thinks it highly probable that the grape-seed was the exciting cause of the inflammation, which ultimately led to ulceration and fatal perforation of the appendix.

The following two cases of haemoptysis, in infants of three months old, communicated by Dr. Morris, are extremely interesting:

The first case was a male, one of twins, of a large size, and fine health up to the time of its attack. The mother, a woman of unusual intelligence and energy, reported the child to be labouring under an attack of colic, with diarrhoea of some days' standing. The discharges were frequent, green, and slimy. There were much heat of skin and thirst. The abdomen was flaccid, and the face anxious. The child cried much, and the sound was plaintive. The usual prescriptions in such cases were made: warm poultices to the bowels: small doses of calomel and castor-oil. By these means, the condition of the child was improved, though the heat of skin and febrile disturbance still continued. About the third day of my attendance, the mother showed me her collar, which was smeared with blood, that, she assured me, had been discharged from the mouth of her infant. I at once ascribed it to some ulceration of her nipple, for which I searched carefully, but without being able to detect the slightest solution of continuity. The gums and throat of the child were next examined, and an ulcer was found near the isthmus faecium, to which, though small, the issue of blood was supposed to be owing. The following day she exhibited a handkerchief much stained with blood, of a pink hue, which had been discharged again by the child. Dr. Meigs was now requested to see the infant, and his suspicions were so strong that the blood was derived from the breast of the mother, and vomited by the child, that he could not be persuaded to the contrary till he had examined the nipple with a magnifier, and applied smart friction with a cambric handkerchief. The respiration of the child did not deviate from the natural state sufficiently to attract our attention, though we visited it often, and examined it anxiously; nor was there, at any time, the slightest cough. After lingering a few days—the diarrhoea varying in degree—it sank into coma, followed by convulsions and death. The autopsic examination, made by Dr. Sargent, resident physician to the Pennsylvania Hospital, was as follows:

Exterior aspect of body pale; hands and feet of a bluish hue; similar colour of all the dependent parts of the body and limbs; very slight, if any, emaciation. The mouth and nose contained a frothy, reddish-white fluid, which escaped freely from these cavities when placed in a dependent position.

Brain not examined—nor posterior part of mouth and fauces. Larynx perfectly healthy.

The mucous membrane of the trachea and of the bronchial tubes, as far as their fourth or fifth ramifications, was reddened, and, in the bronchial tubes, slightly thickened, but in both entirely free from false membrane, or viscid secretion of any kind. The inferior portion of both lungs soft and crepitant, but containing abundance of a colourless serous fluid.

The lower lobe of the left lung was of a vivid red colour; contained a very small quantity of air, and but little serum; consistence of its tissue not materially diminished. The right lung was of the same bright red colour in its middle and lower lobes; the consistence of both these lobes was diminished, particularly of the middle; and the greater portion of this lobe sank when placed in water of medium temperature. There was no appearance of pus, nor of lobular discolouration or induration. No adhesion between the opposed pleural surfaces of either side; nor any effusion of lymph or serum in either pleural cavity. Both lungs were expanded. No tubercles in the lungs, or in the bronchial tubes.

The heart was of a healthy appearance; foramen ovale open.

The abdominal viscera were all carefully examined, but no lesion of any kind could be detected.

Within a week after, the surviving child was taken with symptoms precisely similar. Guided by the light derived from the examination of the preceding case, attention was now turned to the chest. With great difficulty, owing to the extreme restlessness of the infant, we were enabled to detect dullness, upon percussion, of the posterior part of the lower lobe of the right lung, with slight mucous rattle. The quantity of blood discharged, though less than that in the preceding case, was considerable; and in this instance Dr. M. saw it in the mouth of the child, frothy, and mixed with mucus. Small cups were applied to the back of the child, and two ounces of blood taken. Calomel, in minute doses, was given to act upon the diseased secretions of the liver; and, in a day or two, our patient was convalescent.

ART. XVIII.—*A Synopsis of the Symptoms, Diagnosis, and Treatment of the more common and important Diseases of the Skin:* with sixty coloured figures. By N. WORCESTER, M. D., Professor of Physical Diagnosis, and General Pathology in the Medical School of Cleveland, &c. 8vo. pp. 292. Philadelphia, Boston, and Cincinnati, 1845.

It is surprising how little attention has heretofore been paid by American physicians to the study of the diseases of the skin, and how few among them are acquainted with their pathology, their diagnostic characters, and their proper treatment. Whether this has arisen from the less frequent occurrence of cutaneous affections in this country than in many portions of Europe, or from the obscurity with which they have been enveloped by the difference in the nomenclature and classification adopted by the several authors who have written professedly upon them, it is difficult to determine; perhaps both these causes have tended to produce that indifference with which almost every thing in relation to these diseases has been treated by the medical profession in the United States.

When we consider the variety and importance of the cutaneous diseases—their generally disgusting appearance—the very troublesome and often distressing symptoms by which they are attended, and the tendency in many of them, when neglected or mismanaged in their earlier stages, to produce changes in the organization of the skin and subcutaneous tissues, which render their removal extremely difficult, or even impossible, by any plan of treatment, we cannot but regret the small amount of attention that has been directed by our physicians to their investigation.

“They can scarcely be said,” as Dr. Worcester correctly remarks, “to form a part of the professional education of students, in the annual courses of medical lectures of this country,” while the want of success exhibited by the regular practitioners generally, in their management, has too often consigned the subjects of

them to the care of the designing empiric, to whom they afford a fruitful source of emolument.

The work before us is, we believe, the first American treatise that has been published upon the diseases of the skin; and we trust that before long it may be followed by others of a more strictly original character; in which the authors instead of repeating with servile accuracy the theories, classification, and therapeutical directions of the European dermatologists, shall present us with the results of their own observations and experience.

Dr. Worcester's only aim in the preparation of the present synopsis, has been to present to the profession "a concise and accurate treatise on the diseases of the skin"—"that can be afforded at such a price as to be within the reach of all"—and, "if he has succeeded in giving a correct description of the more common forms of these affections, illustrated by well executed plates, with the most appropriate treatment" for each, his object, he assures us, has been accomplished; utility and not originality having been his design.

We are persuaded that the work will be found a convenient manual for the use of such as desire to enter upon the study of "the symptoms, diagnosis and treatment of the more common and important diseases of the skin." The author appears to have consulted with considerable care the best and most authoritative writers on the subjects of which he treats; and from the materials thus collected has formed a valuable synopsis—which, though too concise to satisfy those who desire to make themselves perfect masters of dermatology, is sufficiently minute as an introduction to its study.

The figures are copied from Willan, Bateman, Thompson, Rayer, Alibert, Wilson, Erichsen, Cazenave and Ricord; their execution, however, cannot be very highly praised, and though they may afford some idea of the affections they are intended to represent, it will be, we must confess, at best but a very imperfect one.

Dr. Worcester has followed the classification of Willan, so far, at least, as relates to the arranging into orders of the different cutaneous affections, and the system upon which this arrangement is based; he has, however, for the purpose of facilitating diagnosis, divided the several orders of Willan into *two groups or divisions*, the dry, and the moist. The first group includes the vesiculae, bullæ, and pustulæ, the second, the exanthemata, papulæ, squamae, tuberculæ, and maculae. This, if the classification of Willan is adopted, constitutes a very useful modification of it; but, we believe, that a classification somewhat similar to that adopted in the elaborate work of Wilson, in which it is attempted to arrange the diseases of the skin according to their physiological and anatomical characters, will be found the most simple and easy of application, and the one best adapted to lead to a correct knowledge of the character of these diseases, their prevention, and cure.

In the arrangement alluded to, "the dermis and its appendages, its glands and follicles, are considered to be the seat of all the changes which characterize cutaneous pathology;" consequently, cutaneous affections are divided by him in four groups or divisions, namely: those of the dermis, those of the sudoriparous glands, those of the sebaceous glands, and those of the hair and hair follicles.

The synopsis before us does not embrace the eruptive fevers—from the fact, as the author remarks, "that the eruption in these affections is only a symptom of the general disease, that a minute account of them is contained in most of the treatises on the theory and practice of medicine, and that the principles of diagnosis are comparatively well understood."

We can with great confidence recommend the work of Dr. Worcester to the notice of our readers—who, while they cannot fail to receive instruction from its pages, will feel an additional pleasure in consulting it from the very beautiful manner in which it is printed. It speaks well for the taste and mechanical skill of the printers of Cincinnati.

D. F. C.

ART XIX.—1. *Sixth Annual Report of the Directors and Superintendent of the Ohio Lunatic Asylum, to the forty-third General Assembly, Dec. 9, 1844.* Columbus, 1844, pp. 67.

2. *Annual Report for 1844, of the Managers of the Lunatic Asylum (at Lexington, Ky.,) pp. 38.*
3. *Seventeenth Annual Report of the President and Directors of the Western Lunatic Asylum, to the Legislature of Virginia; with the Report of the Superintendent and Physician, for 1844, pp. 45.*
4. *The second Annual Report of the Physician of Mount Hope Hospital, (late Mount St. Vincents) Baltimore, for 1844, pp. 27.*

1. Dr. Awl's report for the past year, like those which have preceded it, affords evidence of the great philanthropy of its author, as well as of his professional skill and judgment.

		Males.	Females.	Total.
Patients in the Ohio State Asylum Nov. 15th, 1843	77	71	148	
Admitted during the year	39	29	68	
Whole number during the year	116	100	216	
Discharged and died	37	33	70	
Remaining, November 15th, 1844	79	67	146	
Of those discharged, there were cured			40	
Died			7	
Whole number of admissions (6 years)	287	254	541	
“ “ discharged, cured	138	105	243	
“ “ died,	34	23	57	
“ “ single			266	
“ “ married			288	
“ “ widowed	12	35	47	

Ages at which Insanity commenced.—Under 20 years, 56; from 20 to 30 years, 240; 30 to 40 years, 130; 40 to 50 years, 76; 50 to 60 years, 32; 60 to 70 years, 7.

Causes of Death.—Inflammation of liver, 1; dropsy, 2; inflammation of brain, 3; fever, 3; apoplexy, 1; palsy, 3; consumption, 6; epilepsy, 7; marasmus, 6; diarrhoea, 9; dysentery, 11; inanition, 5.—Total, 57.

In allusion to the deaths by epilepsy during the past year, Dr. A. writes as follows:

“ The months of December, January and February, were particularly severe upon our epileptic patients. Their convulsive paroxysms were increased in number and severity, followed by an extraordinary sinking and prostration of the vital powers, occasioning death in the three instances mentioned, and an unusual amount of suffering and weakness of the body and mind, for many days, in all who survived. We observed something of the same kind of suffering with this class of patients, about two years since, when, as upon the last occasion, it appeared to assume the form of a special endemic amongst the epileptics. All others continued to enjoy their ordinary health. It was characterized by very frequent returns of the epileptic spasms, with a strong tendency to apoplexy. The pulse was remarkably small, weak, and fluttering; features dull, unmeaning and sunken; mind lost, or imbecile, attended with great exhaustion of physical strength. On both occasions, it was wonderful to observe how the most robust were enfeebled and fallen, and how long time it required for them to regain their former strength and condition of mind and body. A hired girl in the institution, subject to occasional epilepsy, was also observed to suffer from the same train of symptoms. With the last appearance of this peculiar endemic, the weather was unusually mild and open for the season, and the country extensively inundated from continued rains; the thermometer being greatly elevated and the barometer depressed, for a long period of time.”

The report contains an interesting account of the observance of the 4th of July

at the Asylum, and of the ceremony of laying the corner-stone of the "West Verandah," an additional edifice now in progress.

2. It is a subject of congratulation for all who are either directly or indirectly concerned, that the Kentucky State Asylum has at length attracted the attention and secured the interest of persons who were disposed to raise, and who now are raising it from the wretched condition in which—if the accounts given of it be correct—it has until recently been suffered to exist. Dr. John R. Allen, to whose qualifications for the situation the managers of the asylum bear satisfactory testimony, has received the appointment of superintendent, and his efforts appear to be directed to a general reformation of the establishment, with the view of placing it upon a par with the other institutions of the kind in this country. The several means of moral treatment have already been introduced, and other meliorations of the condition of the patients effected.

The detailed statistics of the report embrace a period of but ten months, from March to December, inclusive, 1844.

	Males.	Females.	Total.
Patients in the Asylum, March 1st, 1844	92	71	163
" admitted from March 1st to Dec. 31st	46	27	73
Whole number during that period	138	98	236
Discharged and died "	36	17	53
Remaining, December 31st, 1844	102	81	183
Of those discharged, there were cured	22	12	34
Died	5	3	8
Of the whole number, there were single	99	40	139
" " " " married	30	36	66
" " " " widowed	7	24	31

The number of patients admitted from the time of opening the Asylum, in May, 1824, to the 31st of December, 1844, was 1128

Discharged and eloped during the same period 515

Died 416

In reference to the discharges, &c., (515) Dr. Allen says:—"From this number, deduct 93 elopements and 25 removals, and we have the number of recoveries, 404. We have, in this estimate, taken it for granted that for some years after the opening of the books of the Asylum, all recovered who were discharged, or so marked. This, perhaps, is not more than generally true, as we ascertained that some thus marked had been removed, &c. The elopements have amounted to about one in twelve, a very large proportion. For some years back, however, this has been greatly reduced. Some years none have eloped. In the last four years, about one in twenty-eight; during this year, one in fifty-seven."

Of the deaths, it is remarked:—"This great mortality seems to have attended this establishment up to the present year; and during this year not a very small portion have died. For three (four?) years past, 1840, 1841, 1842 and 1843, including January and February, 1844, there have occurred 105 deaths, about 1 in 4. During the present year (since 1st March last) we have had 8 deaths out of 236 patients, about 1 in 29½."

The subject is again recurred to in the report, with the following explanatory remarks:—

"The immense fatality may be accounted for on reasonable grounds. Our house, pronounced by one well qualified to judge, 'at best but a comfortable prison,' and which interferes with every thing else, is again at fault here. It cannot be ventilated or warmed well; pure air and proper temperature cannot be always secured. The patients were, for a number of years, confined almost entirely to their rooms, and sufficient exercise was consequently not allowed. Their diet was also much neglected for a length of time. And then that dreadful epidemic, the cholera, invaded the Asylum during its prevalence in this country, destroying 30 or 40 patients ** *. But perhaps the greatest cause of such unusual mortality has been a want of sufficient medical attention. No physician, however skilful, can treat the incidental diseases of the insane, without an hourly and uninterrupted attention to them ** *. Medical men of the first distinction,

and practitioners of decided character, have generally been the attending physicians. Allowed but a trifling compensation for their services, they could not be expected to pay more than an occasional, or, at most, a daily call to the Asylum. With the closest and best directed attention to the incidental disorders of the deranged, success cannot be so great as among other sick; and with deficient care, mortality must necessarily be increased in a greater ratio."

With each successive year the interest manifested in mental diseases, and in those who are afflicted with them, appears to increase and extend, among physicians, philanthropists, legislators and the community in general. Facilities for their accommodation at institutions in which they may be subject to the most successful mode of curative treatment, keep pace with this progressive interest. At the present time, large additions are being made to the Massachusetts, New York and Ohio State Asylums, and an enlargement of that of Kentucky is recommended by Dr. Allen. In Rhode Island a farm has been purchased and the buildings of an asylum are about to be erected, and the legislatures of New Jersey and Indiana have authorized the establishment of similar institutions in those states.

	Males.	Females.	Total.
3. From Dr. Stribling's report, we learn that the whole number of patients in the Asylum at Stanton during the past year, was - - -	130	55	185
Of these, there were in the asylum Jan. 1st, 1844	81	38	119
" " admitted during the year	49	17	66
Discharged, eloped, and died	- - -	34	8
Remaining December 31st, 1844	- - -	96	47
Of the 42 who left the asylum, there were cured	21	6	27
" " " " died	- - -	3	2
Of the whole number, there were married	- - -	22	15
" " " " single	- - -	94	32
" " " " widowed	- - -	9	8
" " " " unknown	- - -	5	0
Whole number of patients admitted from July 1st, 1836, to Dec. 31st, 1844	- - -	227	97
" " " discharged	"	145	60
" " " cured	"	84	39
			324
			205
			123

The proportion of cures is greater in the females than in the males.

Dr. Stribling thus gives his views in regard to the utility of medical treatment.

"Whilst we are free to admit that no institution for the insane can be conducted with success in which a judicious, humane and extensive course of moral management is not deemed indispensable to the best interests of the great majority of its inmates, we are equally satisfied, that in most cases in which the duration of the malady has not been such as to preclude all hope of recovery from the use of such means, medicine, in some of its forms, affords a most valuable auxiliary in their treatment; and in many cases it not only proves necessary, in order to render the patient susceptible to moral influences, but so far as we have been capable of tracing effect to cause, we are satisfied it has often merited the entire credit of the cure."

Of the moral treatment he writes as follows:—

"The high estimate which we attach to the moral department might be inferred from the preceding remarks, even had we not expressed, as we have done, so fully, our views in regard thereto in former reports. We need only add here, that the great principles of classification, labour, exercise, amusements, occupation, diet, and last, though not least, religious instruction, are never permitted for a moment to be lost sight of, in the management of this institution,—and every means are afforded, every inducement held out to the patients to avail themselves of the inestimable advantages to be derived therefrom."

By the completion of three additional buildings, apartments for eighty patients have been made during the past year. The asylum can now accommodate two hundred and twenty. Dr. S. suggests the necessity of an institution for the coloured insane of Virginia, and intimates a willingness to take the charge of it provided the

legislature should see fit, from a motive of economy, to connect it with, or make it a department of the Stanton Asylum.

A large portion of the report is occupied by the "system of regulations" for the asylum.

4. This well-written document, from the pen of Dr. Stokes, is the first we have received from the institution under his medical care.

The Mount Hope Hospital is not exclusively devoted to the reception and treatment of the insane, but has a department for "general diseases."

		Males.	Females.	Total.
Insane patients at the beginning of the year 1844	-	13	22	35
Admitted during the year	-	41	22	63
Whole number	-	54	44	98
Discharged and died	-	30	21	51
Remaining Dec. 31st, 1844	-	24	23	47
Of the cases discharged, there were cured	-	28	11	39
Died { mania-à-potu	-	3	1	6
{ insanity	-	1	1	

Of the sixty-three patients admitted during the year, no less than *twenty-three* were labouring under mania-à-potu. Four of these died and four remained at the end of the year, leaving 19, all of whom, we infer from the nature of the disease, although nothing is said upon the subject in the report, were cured. Hence the greater proportion of cures than in asylums where cases of mania-à-potu are never, or but rarely received.

The following extracts give a lucid exposition of the principles by which the medical and moral treatment is governed at this institution.

"Practitioners may rest assured, that the more they are guided in their treatment by the general principle, that each case should constitute, in itself, a distinct subject of study and consideration, and that the means of cure should be appropriate to its peculiarities at the time of prescribing for it, a greater degree of certainty and success will attend their efforts. We should endeavour to ascertain by a careful analysis of the symptoms, the exact pathological or physical conditions existing in the particular case, and direct our remedies as accurately as possible, with a view to the removal of that morbid condition."

"We hold it to be a measure of primary importance in their moral management, to endeavour to obtain and preserve the confidence of each patient. This confidence may be viewed as the very keystone of all moral treatment; and as conducive to its attainment, it is necessary that our daily intercourse with them should be characterized by an untiring sympathy, and by constant patience and kindness. We hold it still further to be our bounden duty, in order to secure them cheerfulness and content by day, and comfortable rest by night, to resort to every innocent means calculated to amuse and occupy them. Thus, by the avoidance of every thing likely to irritate and excite, and by the encouragement of every effort at self-control and self-government—omitting no opportunity to increase their self-respect, we seek gradually to restore the delicate balance of the mind. In a word, we endeavour to keep always in view 'the precept and the maxim' of M. Pariset. The *precept* is, to favour the renovation of the organization by attending to the excretions and to nourishment. The *maxim* is to establish with the patient the only authority to which they yield; an authority founded on confidence and respect, and only to be obtained by justice and goodness.

"It will thus be perceived, that the general principle pervading our whole system of moral management of the insane, is to treat them as far as practicable as if they were sane.

"As Sir Henry Halford advises, 'we act as it were upon a system of education, and aim thereby at confirming the spirits, and strengthening the mind of the convalescent; and as the discipline employed in youth encourages and enforces the predominance of reason over the passions, so does discreet converse assist in restoring reason to her seat, and in giving her back again her proper sway over wild impulses. Thus we engage the mind agreeably by presenting to it new ob-

jects, and by recalling former pursuits to their wonted acceptance.' To effect our purposes we never resort to coercive measures. We never seek to crush and subdue the spirit of the violent by close confinement in a cell. We have nothing of the kind about the establishment, and have discarded the tranquilizing chair, the straight-jacket, &c., as wholly inapplicable in any case of mental derangement. ' Firmness and kindness; perfect firmness and kindness not to be averted from its objects by the perverseness of the patient, we find to be more powerful than threats and severity.'

P. E.

ART. XX.—*Mental Maladies. A Treatise on Insanity.* By E. ESQUIROL, Physician in Chief of the Maison Royale des Aliénés de Charenton, formerly Inspector-General of the University, &c. Translated from the French, with additions, by E. K. HUNT, M. D. Philadelphia: Lea & Blanchard, 1845: pp. 496.

THE treatise of Esquirol on mental diseases has, for a long period, been almost universally regarded as one of the very best and most comprehensive that has anywhere appeared on the important division of medical science, to which its author devoted, with remarkable success, the greater portion of a long and useful life.

The original work is to be found in the library of every one who professes to be familiar with insanity; and the sentiments of Esquirol are everywhere quoted as authority on this subject. For a long period the medical director at the immense Hospital of Salpêtrière,—of that at Charenton, and with opportunities for observation in private practice, perhaps never equaled by any other individual; with a mind admirably constituted, and with systematic habits and great accuracy of observation, he seemed peculiarly qualified to do infinite service to the community, by the publication of the results of his practical reflections. From such a man, a work could hardly fail to take a permanently high standing, when its author could say as Esquirol does in the preface to his great "treatise," "It is the result of forty years' study and observation. I have noticed the symptoms of insanity, and have studied the manners, habits and wants of the insane, in the midst of whom I have passed my life. I have also tried the best modes of treatment. Confining myself to facts, I have arranged them according to their relations. I have stated them as they have been observed, without, in general, attempting to explain them; and have avoided systems, which always appeared to me more seductive by their splendour, than useful in their application."

The work before us is a translation of all that portion of Esquirol's treatise "relating properly to insanity; the remainder, referring, for the most part, to the statistics and hygiène of establishments for the insane, together with the medico-legal relations of the subject, has been omitted," as being likely to add disproportionately to the size and cost of the volume.

It will hardly be necessary in referring to a work so well known in the original, to enter upon any minute analysis of its contents or of the principles advocated by its author; we shall do little more than state the different subjects which are fully and ably treated of in the volume before us, and notice some few of the additions made by the translator.

After a full description of insanity, its different divisions—its causes—and treatment, separate chapters are devoted to the subjects of hallucination, illusions of the insane, puerperal insanity, epilepsy, critical termination of insanity, lypemania or melancholy, demonomania, suicide, monomania, mania, dementia and idiocy. All these important subjects are ably treated, and a great variety of cases detailed in a manner that cannot fail to interest the professional reader. A great amount of pathological information is also very lucidly given in the minute autopsies which are recorded in fatal cases.

Of the numerous notes by the translator, scattered throughout the volume, the most valuable are those which relate to the treatment of insanity, as practised in this country, and which differs mainly from that recommended by our author, in the much more liberal use of tonics and narcotics, especially the latter, than was common anywhere when Esquirol published his treatise. Some diversity of

sentiment still exists among the medical officers of American institutions for the insane, as to the precise extent to which opiates should be carried, but by nearly all, we believe, they are regarded of importance, and by some, for a very considerable class of patients, as more valuable than all other medical remedies together. Much discrimination is unquestionably required in the selection of the cases in which they are desirable, and afterwards administering them in full doses for a sufficiently long period.

We agree with Dr. Hunt, that the rarity of post-mortem examinations in this country in fatal cases of insanity is a matter for great regret, and trust that gentlemen having hospitals for the insane under their care, will lose no suitable opportunity for these investigations, which must ultimately lead to important practical results.

Dr. H. has also added notes that will be read with interest, on the treatment of some of the varieties of insanity; on epilepsy; on the means of preventing suicide; and a history of the delusion of "Millerism," which, of late years, particularly in the northern sections of this country, has been a most fertile cause of insanity.

From a cursory examination, the translator appears to have executed his laborious task with fidelity; and to him and the liberal publishers the profession must feel under obligations for having placed within the reach of all, an English version of a standard work upon a most important, but heretofore too much neglected subject; a volume filled with sound principles and carefully observed facts, one which should be upon the shelves of every physician, and which can be read with pleasure and hardly be consulted without profit.

T. S. K.

ART. XXI.—*Twenty-fourth Annual Report of the Bloomingdale Asylum for the Insane.*
By PLINY EARLE, M. D., Physician to the Institution. New York, 1845: pp. 55.

THE Bloomingdale Asylum is a branch of the New York Hospital, located about six miles from the city of New York, and, from the interesting report before us, is in a highly flourishing condition. During the year 1844, 57 males and 49 females, a total of 106 patients, have been admitted into the institution, making the whole number under treatment during that period 206, of whom 110 were males and 96 females. During the same period, 102 patients were discharged or died, and of these, 50 are reported as *recovered*, 27 *improved*, 12 *by request*, (condition not stated,) and 13 died. Among the admissions, were several cases of *delirium tremens*, a disease which Dr. Earle very properly remarks "ought not to be classified with ordinary mental alienation," and which we have always thought ought not to be treated in the same establishment.

Of the 206 cases under care, 127 were mania, 35 melancholia, 39 dementia, 3 idiocy, and 2 moral insanity.

Of the supposed causes, those supposed to be *physical* amount to 113, while the *moral* are only 46, 47 of the whole number being registered as *unknown*.

Of the same number 107 were single, 78 married, and 21 widowed.

From the tenor of Dr. E.'s remarks, the premature removal of patients is a serious evil at Bloomingdale as well as at the generality of institutions, where the friends of patients pay their board, and where no authority exists to detain an individual longer than comports with the theoretical notions or is consonant with the feelings of friends who have little knowledge of the true nature of insanity or of the means required for its relief. We know of no way in which our professional brethren could do a greater service to the community than by impressing upon its members, that insanity is chronic in its character, and that a long course of treatment—protracted even to a year or more, may be requisite for the restoration of some, whose minds are afterwards perfectly sound during a long life.

On the subject of suicide Dr. E.'s remarks are sound and judicious. This class of patients gives more anxiety to the medical officers of insane hospitals than all others put together, and with all the precautions that can be taken accidents will occasionally occur.

Dr. E. repudiates the idea of placing such patients generally under corporeal restraint and for the very good reason, if there were not other weighty ones to be urged against the measure, that in many cases it would be quite ineffectual. In reference to the *medical treatment* of insanity, we entirely concur with Dr. Earle, "that the report of a public institution, intended as it is, for general readers, for persons mostly unconnected with the medical profession, is not a legitimate or appropriate organ through which to publish a detailed account of the subjects belonging to this department." We have never been able to understand, why the details of *medical treatment* in *insanity*—the different formulæ employed, or dissertations on these subjects should be discussed in documents unquestionably more *popular* in their general character than the same matters when applied to fevers, to phthisis, or any other maladies. Such information is, or ought to be intended for the profession, and with great deference for the opinions of some who differ from us on this point, the medical journals of the country are the media through which it should be obtained.

During the past winter a course of lectures upon miscellaneous subjects has been given for the advantage of the patients and with very satisfactory results. We have no doubt that for hospitals of a particular description, lectures will be found the best and most popular mode of instruction for insane patients.

On the subject of restraint, Dr. E. believes with most American superintendents, that mechanical means are rarely required, but that "there are cases when the application of them is the most judicious course that can be pursued." We are gratified to learn that "the so called 'tranquilizing chairs,' which had for many years been among the means of restraint, were taken from the halls in April last, and neither of them has since been used."

Why this chair was called *tranquilizing*, we cannot imagine, for such an effect we never saw produced by it; in excessively rare cases it might be used with advantage, but it is so liable to abuse and to be used unnecessarily, that we feel confident it is better to banish it from all institutions for the insane. Of the means of restraint, Dr. E. regards "the *camisole*, the only distinguishing peculiarity of which is, that the sleeves are about twice the length of those of ordinary garments," "among the most simple, effectual, and least offensive to the patient.

An interesting historical notice of the provisions made for the insane by the corporation of the New York Hospital, follows, and the report concludes with tables of the produce of the farm and garden, meteorological observations and the form of register adopted at the asylum.

T. S. K.

ART. XXII.—*Dissertatio Obstetrica Inauguralis de Prolapsu Funiculi Umbilicalis. Auctore.—Joh. Christ. SAXTORPH. Medicus subsidiarius Nosocomii Fredericiani. Hauniæ, MDCCCXL.*

An Inaugural Dissertation on Prolapsus of the Umbilical Cord.—By JOHN C. SAXTORPH, Subordinate Physician of the Frederick's Hospital. Copenhagen, 1840: 8vo., pp. 68.

FROM the statistics collected by the author of the present dissertation, who appears to have collated, with great industry, almost every thing that has been written upon the subject of prolapsus of the cord by the ancient and modern obstetrical authors,—compared with those given by Churchill, we find that the frequency with which this accident occurs, is rather less than four times in every thousand cases of labour. In two hundred and ninety-two cases, the prolapsus occurred in head presentations; in forty-two, in presentations of the head and extremities; in five, in presentation of the nates; in twenty, in presentations of the feet, and in twelve, of the arm or shoulder.

In 356 cases of labour complicated with prolapsus of the cord, collected by our author, the infants in 195 were born dead, and, in 355 cases given by Churchill, 220 of the children were lost. From the two sources we obtain the statistics of 463 cases of prolapse of the cord, in which 380 of the infants were born dead, being about 82 in the hundred, a larger mortality, as Churchill remarks, than we find in any other order of practicable labour.

From these facts, we can understand the great anxiety which many of the European obstetricians have evinced to discover some effectual means either to prevent the prolapse of the cord at the commencement of labour, or to replace and retain it beyond the head of the child when its descent into the pelvis has unfortunately occurred.

The whole subject is very ably discussed by Dr. Saxtorph—who has collected and compared the opinions of all the leading authorities in relation to it, and described all the various procedures that have been suggested to save the life of the infant when prolapsus of the cord takes place.

His dissertation constitutes certainly one of the most complete digests of all that is known, or that has been imagined in reference to this accident, its causes, its prevention, and its remedies, that we are acquainted with. But, although it contains numerous references to authorities with whose names even we are but little familiar, and presents the results of the experience of the entire host of obstetrical practitioners of nearly all ages and all countries, it affords, after all, scarcely a single useful rule to direct us in the management of the cases of labour of which it treats, beyond what are to be found in any of the recent works on midwifery.

Of the various instruments that have been proposed with the view of carrying up the prolapsed cord, and retaining it beyond the head of the foetus until this has so far descended into the pelvis as to prevent it from again falling down—of which accurate delineations are given by our author—although some are better adapted, no doubt, for the purpose than others, no one will be found invariably to succeed; few of them can be used, indeed, without incurring some risk to the soft parts of the mother whatever degree of caution may be employed.

The instruments described and delineated in the work before us, are those of Aitken (*Elements of Obstetrics*); Eckardt (see *Busscher, de funiculi umbilicalis prolapsu, Journ. Gén. de Méd.*, t. x.); Ameline (*Journ. Gén. de Méd.*); Ducamp (see *Busscher*); Dudan (see *Dewees—Velpeau*); Champion (*Schure, de la procidence du cordon ombilical.*); Michaelis (*abhandlungen aus dem Gebiete der Geburtshülfe*); Bouhard (*Neue Zeitschrift für Geburtkunde*, bd. 2); Schöller (*Ibid.*, bd. 6); Davis (*Operative Midwifery*); Trefurt (*Neue Zeitschrift für Geburtkunde*, bd. 2); Tellengen (see *Busscher*); Bakker (*Journ. Gén. de Méd.*, t. x.).

D. F. C.

ART. XXIII.—*Practical Remarks on some exhausting Diseases, particularly those incident to Women.*—By SIR JAMES EYRE, M. D., Physician at St. George's and St. James's Dispensary. London: John Churchill, 1845: 12mo, pp. 75.

THE object of this essay is to induce practitioners to make trial of the oxide of silver in pyrosis, certain cases of gastric disorder, the slowly exhausting hemorrhage from mucous surfaces, and above all, atonic menorrhagia, which diseases, the author confidently predicts, will henceforth, by the use of the remedy just alluded to, be as amenable to treatment as it has hitherto been unmanageable.

Attention was first drawn to this remedy by Dr. C. B. Lane,* who reported very favourably of its effects in gastralgia, pyrosis, menorrhagia, hemorrhage from the bowels, diarrhoea and irritable bladder, and its effects are said to have been speedy, and produced without a single bad symptom.

Dr. Lane also says that Dr. Golding Bird has tried it in one hundred cases, and “thinks well of it in menorrhagia, considering its properties to be tonic, and to a certain degree sedative, and that Drs. Clendinning and Ryan thought it useful in epileptic and gastralgic affections. The result of Dr. Eyre’s experience is fully confirmatory of the high character here given of the oxide. He has administered it in a large number of cases, the records of most of which have been kept, and many of which are reported in the present work.

That the oxide is a tonic and a sedative Dr. Eyre thinks there can be no doubt, and that there is good evidence to prove that it is a safe and efficient astringent. He never gives it in doses exceeding three grains a day, and its employment is

* See Nos. of this Journal for Jan., 1842, p. 204, and April, 1842, p. 464.

not recommended where febrile action exists in any considerable degree. "In addition," says Dr. E., "to its value in gastrodynæ, in pyrosis, in hæmatemesis, and in the first and second classes of menorrhagia, of Dr. Fleetwood Churchill, it will be found to be productive of infinite benefit in restraining, when absolutely necessary, hemorrhage proceeding from the intestinal canal, obstinate chronic diarrhœa, colliquative perspirations, leucorrhœa and other maladies, in the treatment of which the writer is, at the present time, extensively testing its efficacy."

ART. XXIV.—*The Principles of Surgery.* By JAMES MILLER, F. R. S. E., F. R. C. S. E., &c. Philadelphia, Lea & Blanchard, 1845: 8vo. pp. 525.

At a time like the present, when the attention of practitioners and students is so much directed to operative medicine, we rejoice to see the appearance of a work upon the principles of surgery. Any thing which tends to divert from the study of surgery as an art, to that of surgery as a science, must diminish the love for bloody shows and operative displays now so prevalent, though it will not be overcome until our colleges cease to pander to the morbid appetite, and their teachers devote at least a portion of their time to the exposition of principles.

The design of Mr. Miller in this work is to present a condensed view of the principles of modern surgery. In its preparation it was his endeavour to combine soundness of doctrine with simplicity of arrangement, and plainness of illustration, and these objects he appears to have well accomplished. Being itself a condensed and elementary treatise, it needs no analysis. The work is divided into four sections.

The first treats of Elementary disease, embracing Congestion, Local and Constitutional Irritation, Atrophy, and Inflammation, with its various terminations.

In the second section, Perverted Vascular Action in certain tissues is considered. This embraces Periostitis and other affections of the Bones, the various diseases of the Joints, Diseases of the Arteries, Veins, Lymphatics and Nerves, and Hemorrhage.

The third section discusses the subject of Perverted Nutrition, and the fourth includes all the various Injuries to which our frame is liable.

Appended to the work of Mr. Miller is a good condensed view of the History of Surgery, written originally for the Encyclopædia Britannia. This is a useful addition to the book and will be read with interest. We regret, however, that in any historical sketch intended for the American student that the venerated name of Physick should find no place. With him the study of surgery may be said to have begun among us.

When his career commenced, no separate course on surgical diseases had ever been delivered in these United States,—the few lectures devoted to them being given in connection with those on anatomy. The practice of surgery at that time was such that the rich removed to Europe for advice, or for the purpose of undergoing even what might be called trivial operations, while the poorer classes, except when collected in some one of the then few hospitals of the country, where they fell under the care of men who had been educated abroad, were left to those incompetent to relieve them by operative means, or to ignorant pretenders.

Arriving fresh from the school of Hunter, the youth whom destiny selected to lead the way in the teaching of surgery on this continent, and to as successful and extensive an exercise of it as can ever again fall to the lot of any individual, brought with him the principles of that great master, and by dwelling on their value, extending their application, simplifying them, and successfully demonstrating their practical value, he caused them everywhere to be received and at once to change the face of surgery among us. By the happy adaptation of his methods of treatment, he effected brilliant cures. Established operations which had never before been undertaken here, he performed at the same time that he devised improved or new means for the cure of affections that were previously either rebellious to ordinary treatment, or had not before been attempted.

One of the great points in the character of Dr. Physick was his zealous endeavours to avoid the performance of all operations. He justly looked upon improve-

ments in medical surgery as infinitely more glorious than displays with the knife, and the reformation which he effected in the treatment of chronic inflammation by attention to diet—of diseased joints by means of carved splints and perfect rest—of ulcers by position—of pseudarthrosis by the treatment with the seton, and of fractures by the great simplification of apparatus, may be pointed to as improvements which have been the means of saving thousands from amputation, deformities and beggary.

Like Desault, Physick did less by his inventions and originality to recommend his name to posterity than by the great impulse which he gave to the study of surgery, and by improvements in apparatus and treatment. Like Desault, his teachings were strictly practical, and with both, their auditors were attracted less by eloquence than by the truthfulness of their lessons. Physick, as was the case with Desault, wrote nothing, though less fortunate than he, there were none, as with the latter, to spread before the world in the pages of a surgical journal an expose of his practice; and no devoted pupil, like Bichat, has yet been found to consecrate his memory by a work founded upon the principles taught by and illustrated with the great experience of his master.

G. W. N.

ART. XXV.—*Principles of Forensic Medicine.* By W.M. A. GUY, M. B., Cantab., Prof. of Forensic Medicine, King's College, London, &c. &c. First American edition, with Notes and Additions, by CHARLES A. LEE, M. D., &c. &c. 8vo., pp. 771. Harper and Brothers, New York, 1845.

MR. GUY was induced to prepare this treatise, based upon his lectures on forensic medicine, as a class-book for his students—there being at the time no useful or convenient work to answer this purpose. He was also desirous of placing in the hands of practitioners a manual simplified in its details, furnished with more accurate standards of comparison than are to be found in previous treatises, and with a careful analysis of the statements of authors upon practical points. In his own language, “the plan adopted in treating the several subjects is to begin with a short statement of the existing provisions and requirements of the law, avoiding all unnecessary discussion as to the state of the law in former times and in different countries. The chief medical questions arising out of the law are then investigated under distinct heads; practical rules for medico-legal examination are appended, and the subjects are illustrated throughout by cases.”

The space devoted to each subject has been determined not by the importance of the subject, but rather “by the length of the discussions necessary to render it intelligible,” and the arrangement is the same as that adopted by the author in his lectures, to which it was made to conform in order to render the work more useful to the student in following him.

Mr. Guy opens with a chapter on medical evidence, exposing clearly and fully the circumstances under which a medical man may be called into court, the behaviour he should maintain there, and the testimony he may be called upon to offer. Personal identity, age, sex, are from their close connection in questions of the identification of individuals, considered together in the next chapter. Following these, the subjects of impotence, rape, pregnancy and delivery, all of them involving questions of the greatest moment, are dwelt upon at considerable length and with much ability. Fœticide, infanticide and legitimacy next claim attention; the account of them being prefaced by a careful essay upon the growth and development of the embryo. Under the head of fœticide, the author asks under what circumstances is it proper and justifiable for the physician to induce premature delivery, and thus answers: “The medical man is clearly justified in resorting to any measures which promise to preserve the life of mother and child when both are threatened; and where one only can by any possibility be preserved, the female herself may use her right of self-preservation and choose whether her own life or that of her child shall fall a sacrifice to the means recommended to be used.”—p. 145.

The subject of infanticide is very carefully considered, and a very just appreciation of the various tests to establish the absence or occurrence of respiration, is

laid before the reader, showing how uncertain and therefore useless they very often are.

The second part of the work contains chapters on life assurance and feigned diseases, on the very important subject of unsoundness of mind, dementia, dementia and mania in all its forms and varieties,—to the examination of which the author has applied himself very carefully and at much length, as it involves questions of the highest interest to society and to individuals, and to which within a few years attention has been very closely directed,—on persons found dead,—the questions of real and apparent death, of sudden death and of survivorship being embraced in this chapter;—on death by drowning, hanging, strangulation and suffocation; on wounds; and on death by fire, spontaneous combustion; death by lightning, cold and starvation.

The whole closes with an essay on toxicology, divided into chapters on poisoning in general, and upon the individual poisons arranged in distinct classes. “In treating this important subject,” says the author, “an attempt has been made to render the tests for the poisons more easy of comprehension and to impress them more effectually on the memory, by first arranging them in the order in which they would be applied, on the supposition that the substance submitted to analysis was unknown, and then adding such as are most characteristic of the poison in question. Some useful analytical tables, on a new plan, have been added in the appendix. In the case of some of the more important poisons, the value of individual symptoms and the duration of the poisoning have been deduced from a careful and extensive analysis of cases.”—Preface.

Such are the plan and arrangement of the work before us, the author having made use of the best treatises extant in its compilation; all of which he freely acknowledges. Notwithstanding this, the charge of plagiarism from Mr. A. Taylor’s work has been brought against him by some of the English journals, a charge which we can hardly think well founded, and which the author seeks expressly to provide against, by stating that portions of his work have been taken verbatim from his lectures, and that hence some passages may be found which should have been marked as quotations; an oversight which would cause him much regret, as it would be entirely unintentional.

It will, however, be found to be an excellent manual of medical jurisprudence, containing all that is useful and important for the student or practitioner, whether medical or legal, to know upon the subjects enumerated. It must be admitted, however, that the additions of the indefatigable and competent American editor, have contributed not a little to this result, they amounting to a fifth, if not one-fourth of the whole work, and “adapting the publication to the existing laws and institutions of this country.”

C. R. K.

ART. XXVI.—*The Principles and Practice of Dental Surgery*. By CHAPIN A. HARRIS, M. D., D. D. S., Prof. of Pract. Dentistry and Dental Pathology in the Baltimore College of Dental Surgery, &c. &c. &c. Second edition, revised, modified and greatly enlarged. Illustrated by 69 wood engravings. Philadelphia: Lindsay and Blakiston, 1845: pp. 600, 8vo.

THE early call for a second edition of this work shows the favourable estimation in which it is held by the profession. The author has embraced the opportunity to greatly enlarge and improve his work. Among the additions we notice a description of the several structures which enter into the composition of the mouth; an account of the physical characteristics of the teeth, gums, salivary calculus, &c., and an exposition of the diseases of the maxillary sinus.

It appears to us to be a very good elementary treatise on dental medicine and surgery, and we commend it to the attention of students of dentistry.

ART. XXVII.—*Annual Oration delivered before the Philadelphia Medical Society, by appointment, at the opening of its session of 1844–45.* By D. FRANCIS CONDIE, M. D., Honorary Member of the Society. Published by order of the Society. Philadelphia, 1845: pp. 24, 8vo.

THIS is a very sensible and well-written discourse. The author has been most happy in the selection of his subject, and equally so in the manner in which he has treated it. No topic could be found more appropriate to the occasion, or more replete with interest and instruction than that chosen by Dr. Condie—"an examination into the actual condition and future prospects of the medical profession in the United States."

Dr. Condie has fearlessly exposed the existing condition of the profession,—endeavoured to show the causes of its being no longer held in proper respect, and enjoying sufficient influence, and suggested such measures as he conceives would restore it to the lofty and commanding position to which it is justly entitled.

We regret that we have space only for the following extract:

"The true value of the physician—his competency to fulfil the important duties required of him—and his faithfulness in their fulfilment, can, with difficulty, be correctly and fully estimated by any other than a member of his own profession. Medicine is, unquestionably, one of the most difficult sciences properly to acquire—demanding not only the highest grade of natural ability, but long years of close and laborious study, and an acquaintance with many collateral branches of knowledge. It has, indeed, been correctly remarked, that there is scarcely any circle of human learning, upon the boundaries of which the scientific physician does not necessarily infringe, in some point or other of his extensive orbit. In fact, to acquire that extent of information, and that degree of practical skill necessary to constitute the physician, requires the close and devoted application of all the mind's best energies—under circumstances the most favourable to their full occupation and development. And yet almost every one in the community—whether learned or unlearned—assumes to himself the right to decide, not merely upon the competency of the individual members of the medical profession—which, within certain limits, is his right—but upon the relative value of different medical doctrines and modes of practice.

"The skill of a physician, and consequently the propriety of the remedial measures pursued by him may, unquestionably, be very fairly tested by the general result of his practice—but to do this requires opportunities for observation, and an accuracy of judgment which the members of the community at large do not possess—their decision is consequently founded, in most instances, upon the result of single cases, the circumstances of which are often but imperfectly understood, or entirely misrepresented.

"It is this want of ability in the public to decide correctly upon the value of remedial agents and the competency of medical practitioners—combined with that desire which all alike experience for speedy and certain relief—that renders it, more perhaps than any other cause, the ready dupe of bold pretension and unprincipled empiricism. The vaunted infallibility of any nostrum that promises an immediate restoration of health, becomes far more attractive than the slow and cautious measures pursued by the scientific physician. It is not, therefore, surprising, that the preposterous absurdities of homeopathy—the equally ridiculous and mischievous practices of the Thompsonians, Botanists, and Hydropathists, or the more novel folly of the Chrono-thermists, should become more popular than the curative skill exercised by the highest order of medical abilities, accompanied by the greatest natural and acquired advantages."

**SUMMARY
OF THE
IMPROVEMENTS AND DISCOVERIES
IN THE
MEDICAL SCIENCES.**

ANATOMY AND PHYSIOLOGY.

1. *On the Structure of the ultimate Fibril of the Muscles of Animal Life.* By ERAS-MUS WILSON, Esq., Lecturer on Anatomy, &c. (*Proceedings of the Royal Society*, June 20, 1844.)—By resorting to peculiar methods of manipulation, and employing a microscope of more than ordinary power, Mr. Wilson, with the assistance of Mr. Lealand, has succeeded in discovering the real structure of the ultimate muscular fibril in a specimen taken from the arm of a strong healthy man immediately after its amputation. He finds each fibril to be composed of minute cells disposed in a linear series, flattened at their surfaces of apposition, and so compressed in the longitudinal direction as to have no marginal indentation on the surface; thus constituting a uniform cylinder divided into minute subdivisions by transverse septa, which are formed by the adherent surfaces of contiguous cells. The diameter of the fibril in the state of relaxation is the 20,000th part of an inch. The cells are filled with a transparent substance to which the author gives the name of myoline, and which differs in its refractive density in different cells. In four consecutive cells the myoline is of greater density than in the four succeeding cells, and this alternation is repeated throughout the whole course of the fibril. In consequence of all the fibrils composing the ultimate fasciculus having the same structures, and the cells, which are in lateral juxtaposition, containing myoline of the same density, they act similarly on light, and the whole presents to the eye of the microscopic observer a succession of striæ or bands, dark and luminous alternately, and transverse to the direction of the fasciculus; an appearance which has been noticed by preceding observers, but of which the cause had not been hitherto ascertained. A dark striæ may occasionally appear as a luminous one, and vice versa, when viewed by light transmitted at different degrees of obliquity.

The structure here described, the author remarks, reduces the muscular fibre to the simple type of organization exhibited in the combination of a series of cells, associating it with other tissues of cell formation, and will, probably, he thinks, open new sources of explanation of the immediate agency of muscular action, a power hitherto involved in the deepest mystery.

2. *Lymphatic Hearts.*—By Prof. STANNIUS* the full discovery has been made of the existence of lymphatic hearts in birds, analogous to those in reptiles. He has found them already in the stork, ostrich, cassowary, goose, swan, diver, and hawk; and in all, with the exception of the last two, has found the walls of the heart formed by transversely striated muscular fibres. In the ostrich and cassowary these fibres form a layer from half a line to a line in thickness: in the *natatores* it cannot be discerned with the naked eye, but can (though, in some, still very sparingly) with the aid of the microscope.

It is the existence of these fibres which gives to these organs (already described

* *Muller's Archiv.*, 1843, Heft v.

as lymph-vesicles by Panizza) the right to be considered hearts. Their positions and connections vary much in different birds. In all, several lymphatic vessels open into the cavity of the heart, and a vein proceeds from it which passes under the os ilii and joins the vena cava inferior. Lymph only has been seen in them, and they always have valves which prevent the passage of the lymph backwards into its vessels, and that of the blood from the vein into the lymphatic heart. In the swan and goose, in which alone these hearts have been observed during life, no active independent motion of their walls has yet been clearly seen, though there has been an appearance of a slow approximation of their walls, expelling their contents.—PAGET's *Report in B. & F. Med. Rev.*, Jan., 1845.

3. Anatomy of Cells.—Numerous examples of molecular movements of the granules in cells are described by Mr. ADDISON.* They are seen especially in the pale corpuscles of the blood, pus-globules, and mucus-globules, which all appear full of minute molecules in energetic movement. Prof. RATHKE,† also, has often observed similar movements of particles within the nuclei of the cells of the ova of the frog, river crayfish, &c. But he shows that these movements depend, in all probability, on the currents produced in the fluid contents of the nuclei, by the imbibition of some of the water in which they are examined; for in every case in which they happen, the nuclei and cells become gradually larger; and, by examining them in oil, they neither enlarge nor exhibit the molecular movement. In this way may be probably explained the molecular movement of the pigment-granules of the choroid as seen within the cells. But the facts will not explain the observation of Dr. Sharpey,‡ who has seen pigment-granules coursing round and round within the spherical epithelium-cells of a tadpole, and making the complete circuit of its cavity.—*Ibid.*, April, 1845.

4. Structure and Functions of the Skin and its Appendages.—A complete examination of the structure and some of the functions of the skin and its appendages, with many original observations, has been published by Professor KRAUSE.§ Of course, the sizes and weights of every thing that can be so estimated are given. In explanation of the colour produced in the epidermis by nitrate of silver, and supposed to depend on the decomposition of the tissue, Krause says that if thin-cut layers of epidermis soaked in a solution of nitrate of silver be exposed to the light, and then made transparent by acetic acid, their texture may be seen to be unaltered, but there are very dark granules from 1-1000th to 1-1500th of a line in diameter, on the outside of the larger cells, which are, no doubt, chloride of silver, and reduced silver, and to these, not to a decomposed tissue, the change of colour is due.

Krause says, also, that the colour of the cuticle of the negro does not depend (as Henle supposes,) on pigment-cells, like those of the pigmentum nigrum, lying between the cutis and rete, and mingled with the cells of the latter, but, chiefly, on the colour of the proper nuclei, and cells of the epidermis. There are indeed some few pigment-cells mingled with the proper cells of the middle and superficial layers of the epidermis; but they are distinguished from those of the pigmentum nigrum by containing far fewer pigment-granules, and by having always a dark (not a clear) nucleus. The colour depends especially on the dark or almost black-brown colour of the nuclei, whether free in the deep layer of epidermis, or surrounded by cells. They have dark nucleoli, sharp outlines, appear only very obscurely granular, and cannot be broken into smaller pigment-granules. The cells surrounding them may be seen: in the deeper layers; they also are uniformly dark, though less dark than the nuclei. In the middle and superficial layers, the nuclei, as long as they can be seen, are still dark; the cells are much paler, but brownish and darker than in the corresponding layers in uncoloured persons.

The so-called *Tyson's glands*, the little white elevations which are usually found

* Provincial Med. and Surg. Journal, March 9 and June 5, 1844.

† Müller's Archiv, 1843, Heft vi.

‡ Quain's Anatomy, 1843, p. lvi.

§ In the unfinished article *Haut* in Wagner's Handwörterbuch der Physiologie, Lief. vii.

round the corona glandis of the human penis, and which, after many disputes, have been usually considered as the secerment follicles of the *smegma preputii*, have been carefully examined by Dr. G. Simon.* They are, he says, no more than small round elevations of cutis covered by papillæ and epithelium. They consist of fibro-cellular tissue like that of the rest of the cutis; and the papillæ on them have no peculiar characters. The only function that can be ascribed to them is that of increasing the sensibility of the glans. The only organs which Simon could find for the special secretion of the *smegma*, (and these are not constant,) are whitish corpuscles lying in or beneath the cutis, which, with the microscope, appear as small roundish sacculi, closed below, and opening by a narrow orifice on the surface, and containing a white substance. These are usually situated on or behind the corona glandis, in front of or near the frenum, and sometimes on the anterior surface of the glans itself. Two or three may be found, or, in a few cases, as many as six.—*Ibid.*

5. *Peripheral termination of the Nerve-fibres.*—The investigations of Henle and Kölliker† have proved a new and peculiar mode of termination of the nerve-fibres in the little bodies, seated especially in the nerves of the fingers and toes, which were discovered and to a certain point well described by Pacini of Padua, in 1830. These bodies (to which the name of *Pacinian corpuscles* is now given), are found in man at all ages after the twenty-second week of foetal life, and under all circumstances, and in many mammalia. They are most numerous on the cutaneous nerves of the hands and feet; but they occur also sometimes on other sensitive cerebro-spinal nerves, and on the sympathetic plexuses in the mesentery and mesocolon, and about the pancreas; where they are especially numerous in cats. In man, from 150 to 350 may be counted on a single limb; and they are chiefly abundant on the branches of the digital nerves just penetrating the cutis; to which they are attached singly, or in pairs, or sometimes in groups, by little fibro-cellular pedicles. Through the pedicle of each, a single primitive nerve-fibril passes into the corpuscle.

The corpuscles are of various form, elliptic, ovate, obovate, crescentic, or reniform: they measure, (in parts of a line,) from .66 to 1.2 in length, and from .45 to .6 in breadth. They are semi-transparent, slightly glistening, and appear as if a central cord passed through them. Each of them is composed of from 40 to 60 very thin coats, arranged round a central canal or cavity, like so many capsules enclosed one within another; and each coat or capsule is composed of two layers of fibro-cellular tissue, an outer layer with circular, and an inner with longitudinal fibres. Between each two adjacent layers or capsules, there is an albuminous fluid; it is most abundant between the outer capsules, which are less compactly arranged than the central ones. The outermost of all the capsules in each corpuscle is connected by cellular tissue with the adjacent parts, from which also blood-vessels penetrate inwards through more than half the layers. Here and there the adjacent capsules appear connected by partial septa extending across the spaces containing the fluid, and this is especially the case at the end opposite to the pedicle. The canal or cavity in the axis of each corpuscle contains a fluid like that between the capsules, and, in this fluid, a primitive nerve-fibril. The nerve-fibril, after traversing the pedicle of the corpuscle, and a conical prolongation from the end of the pedicle through the substance of the lower part of the corpuscle, enters the cavity, and at once becomes smaller, paler, and flatter. It passes along the cavity, and at or near its distal end, terminates in a knob, or by bifurcating: in no case is any thing formed like the *terminal loops* of nerves, and it is very rarely that more than one nervous fibril enters a corpuscle; neither does the terminal enlargement of the nerve-fibril resemble a ganglion corpuscle.

Of the use of these bodies little can be said. It is suggested that as their construction with alternate layers of membrane and fluid is rather like that of the electric organs of the electric ray, &c., these also may be electric organs, and, according to Pacini, the chief agents in mesmeric operations. But Henle and Kölliker could find no manifestations of free electricity in them during life. Their

* Muller's Archiv., 1844, Heft i.

† Ueber die Pacinischen Körperchen; Zurich, 1844, 4to.

not occurring upon any known motor nerves, would appear to prove that they have nothing to do with motion; but their existence on many nerves of the sympathetic system, and their non-existence on many sensitive nerves, make it also probable that they are not connected with acuteness of sensation. They may be electric organs, as their peculiar structure suggests; but before they can be concluded to have any relation to animal magnetism, it would be advisable to prove that that has any relation (except in name), to physical magnetism or any form of electricity.—*Ibid.*

6. *Circulation in the Lungs.*—Mr. ERICHSEN,* in an essay to prove that the real cause of death after the sudden introduction of air into the veins, is the difficulty of the passage of frothy blood through the pulmonary capillaries, relates this experiment; a pressure equal to that of from one and a half to two inches of mercury is sufficient to drive bullock's blood, deprived of fibrin, through the capillaries of the lungs of a dog recently killed; but if air be previously blown into the pulmonary artery it will require a pressure equal to that of from three to three and a half inches of mercury to force similar blood through the same set of vessels. The pulmonary circulation being thus arrested, the left ventricle receives an insufficient supply of blood, and respiration ceases in consequence of the defective quantity of arterial blood sent to the nervous centres. But, for some time after respiration has ceased and animal life has nearly ceased, the heart continues to act regularly and forcibly; nor do its right cavities ever become so distended as they are in ordinary asphyxia, unless the air have been forcibly blown into the veins.—*Ibid.*, Jan., 1845.

7. *Long abstinence.*—Dr. CASPER relates in his *Wochenschrift*, (June 8, 1844,) a case of voluntary total abstinence from food and drink. The patient was thirty-six years old. For the first five days he suffered little and confessed neither hunger nor thirst; during this time also he passed no feces and very little urine. After this he became thinner and paler, his sight was weak, he had occasional ringing in the ears, his speech was indistinct, his breath smelt unpleasantly, he discharged only a little urine, his abdomen sank in, and he was very weak. These conditions were increased on the ninth day, and he could not resist taking a little sugared water. In the night of the tenth day hunger, which he had before hardly felt, returned irresistibly, and he took food and recovered. Mitscherlich examined the urine which was passed at the middle of his abstinence, and found that it did not differ from that of a healthy person.

8. *Recurrence of menstruation at an advanced age.*—MM. MURYNCK and KLUYSENS relate in the *Annales et Bulletin de la Société de Méd. de Gand*, two cases in which menstruation recurred several years after it had ceased, and continued to a very advanced. The subjects of both cases were nuns. In one, menstruation had ceased at the age of 52, and recurred at the age of 62, and continued when the case was recorded, at the age of 73, with perfect regularity. What is curious, the patient was attacked on the cessation of her menstrual discharge with gastralgia, which persisted in spite of various remedies, until the recurrence of the discharge, when it left her and her health became perfect. In the second case, the menstrual discharge ceased at the age of 52 also; it recurred at the age of 60, and has continued up to the date of the report, when the patient was 90 years of age. This patient was attacked on the cessation of menstruation with violent colics, followed by tic douloureux, which resisted all treatment, but ceased on the recurrence of the menstrual discharge, and the patient, at the age of 90, was in the enjoyment of health, with all her faculties perfect, and with the tastes and ideas belonging to youth.

9. *Complete absence of the Bladder.*—M. LEITCH has recorded in the *Journal de Méd. de Bordeaux* a very interesting example of this exceedingly rare monstrosity, of which Meckel does not give a single case; Lieutaud, however, relates one, and Pinniger a second case.

* *Edin. Med. and Surg. Journal*, Jan., 1844.

The subject of M. LEITCH's case was a man aged 40 years, who died in consequence of a fracture of the femur. The following were the peculiarities revealed on *post-mortem* examination:

The general appearance of the body resembled that of a female. The skin was soft, the limbs slender, and the shoulders narrow. There was no trace of penis or scrotum, and the umbilicus appeared also to be absent.

Above the pubes there was a small orifice, around which slight excoriations were observed, produced by the flow of urine; a projection near this opening appeared to be the umbilical cicatrix.

On each side of the pubes there was a small eminence covered with a perfectly smooth skin, containing the testicles; the horizontal branches of the pubic bones were absent,—their place was supplied by cartilage; the pyramidal muscles were also wanting. Not the least trace of a bladder could be found. The ureters extended to the orifice just noticed, which was, in fact, formed by their junction. Nothing could be discovered which resembled even a portion of the bladder. The right ureter, however, was enormously enlarged; from the pelvis of the kidney to its external termination being the size of the small intestine. Near its orifice it contracted to the diameter of a goose quill, and at this place some muscular fibres could readily be distinguished. This distended ureter had doubtless, to a certain extent, fulfilled the office of the bladder, and the muscular fibres at its orifice acted as a sphincter. The left ureter was in a natural state. The testicles were small, but healthy; the vesiculae seminales existed, although imperfectly developed; the prostate gland, which was very small, was situated behind the point of union of the ureters; the vasa differentia terminated in two or three small orifices near the external opening.

This man had managed to conceal his deformity. He had sexual desires, and had several times been on the point of marrying.

ORGANIC CHEMISTRY.

10. Researches on the composition of Blood in health and in disease.—The Nos. of the *Gazette Médicale de Paris*, for Nov. 23 and 30, and Dec. 7, 14 and 21, 1844, contain an extremely interesting memoir on this subject presented to the French Academy of Medicine in November last, by MM. BECQUEREL and RODIER, of which we shall give a brief analysis.

I.—Blood in Health.

After a preliminary account of their mode of analysis, MM. B. and R. give the following tables exhibiting the composition of healthy blood.

1. Natural composition of the blood in man.

The following table exhibits the mean composition, and also the maximum and minimum of the blood in 11 cases.

Composition of 1000 grammes of blood of man in health.

		Mean.	Max.	Min.
Density of the defibrinated blood	-	1060.2	1062	1058
Do. of the serum	-	1028	1030	1027
Water	-	779	800	760
Globules	-	141.1	152	131
Albumen	-	69.4	73	62
Fibrin	-	2.2	3.5	1.5
Extractive matters and free salts	-	6.8	8.0	5
Fatty matters	-	1.600	3.255	1.000
Seroline	-	0.020	0.080	—
Fatty phosphorated matter	-	0.488	1.000	0.270
Cholesterine	-	0.088	0.175	0.030
Soapy matter	-	1.004	2.100	0.700

1000 grammes of calcined blood.

			Mean.	Max.	Min.
Chloride of sodium	-	-	3.1	4.2	2.3
Soluble salts	-	-	2.5	3.2	2.0
Phosphates	-	-	0.334	0.7	0.225
Iron	-	-	0.565	0.633	0.508

From those numbers the following important conclusions may be deduced:—

1. The limits within which the composition of healthy blood varies, are small, and probably depend on age, constitution, and diet.

2. The number for the globules exceeds 127, which has hitherto been generally admitted to express their physiological mean. This depends on a distinction not having been made between male and female blood, and probably also on this, that the blood analyzed to determine that mean was not taken from persons really in health.

3. The number for the fibrin 2.2 is below the number 3, which is that generally admitted. MM. B. and R. are, too, satisfied of their accuracy to admit that the error lies with them.

As to the influence of *age*, MM. B. and R. have no analysis below the age of 20. From 20 to 30, the mean they obtained were accurately conformable to the general mean. From 30 to 40, the composition of the blood in every instance corresponded to the general mean very nearly; the only principle which was constantly augmented was cholesterine, and it was nearly doubled. From 50 to 66, there was little difference, save a diminution in the quantity of fibrin, the mean quantity of which was represented by 2. The influence of *constitution* and of diet could not be appreciated, save that the authors of the memoir consider that the quantity of cholesterine increases as the diet is improved.

2. Composition of the blood in the healthy female.

The following table exhibits the result of the analysis of the blood of eight women. Their ages were from 22 to 58.

Composition of 1000 grammes of blood of the healthy female.

			Mean.	Max.	Min.
Density of the defibrinated blood	-	-	1057.5	1060	1054
Do. of serum	-	-	1027.4	1030	1026
Water	-	-	791.1	813	773
Globules	-	-	127.2	137.5	113
Albumen	-	-	70.5	75.5	65
Fibrin	-	-	2.2	2.5	1.8
Extractive matters and free salts	-	-	7.4	8.5	6.2
Fatty matters	-	-	1.620	2.860	1
Seroline	-	-	0.020	0.060	—
Fatty phosphorated matter	-	-	0.464	0.800	0.250
Cholesterine	-	-	0.090	0.200	0.025
Soapy matter	-	-	0.046	1.800	0.725

1000 grammes of calcined blood.

			Mean.	Max.	Min.
Chloride of sodium	-	-	3.9	4.0	3.5
Soluble salts	-	-	2.9	3.0	2.5
Phosphates	-	-	0.354	0.650	0.250
Iron	-	-	0.541	0.575	0.486

A comparison of these figures, with those furnished by the analysis of healthy blood, lead to some important conclusions. First, the numbers obtained in these eight analyses do not agree so closely as do those obtained in the analyses of male blood, the limits between the *maxima* and *minima* being greater. It is difficult to account for this, but the same difference will be found to exist in the female in disease. The mean density of defibrinated blood is less than in the male, consequently female blood contains less solid contents, and more water. The mean density of the serum is the same as in man. The proportion of globules is less in the female than in man, and in this diminution of globules consists the

fundamental difference between the two kinds of blood. The mean of the globules is 127; the maximum 137; the minimum 113. In man, we have 141 for the mean, 151 for maximum, and 131 for the minimum.

The proportion of fibrin is almost the same in woman as in man; the quantity of albumen is the same in the two sexes; the seroline is alike irregular in both; the fatty phosphorated matter (cerebrine) is also almost in equal quantity in each; the chloride of sodium and the various soluble salts are in almost the same proportion in both sexes, and the iron is in each proportional to the weight of the globules. Menstruation exerts a powerful influence on the natural composition of the blood, and chiefly affects the globules. From a careful analysis of the facts in our possession, we conclude that before menstruation commences the quantity of globules is below 127; if menstruation is imperfectly established, if it is incomplete and irregular, the figure remains below the mean; the moment the function is well established it ascends and fluctuates between 127 and 137; after the critical period of life, when menstruation ceases, the number falls again, in one case to 113, in another to 121.

3. Of the blood during pregnancy.

Pregnancy exerts a marked influence on the composition of the blood, causing a diminution of globules and of the albumen; a slight augmentation of the fibrin and of the phosphorated fatty matter and an increase of the water.

The following table exhibits the results of the analysis of nine pregnant women.

Composition of the blood in pregnancy.

		Mean.	Max.	Min.
Density of the defibrinated blood	-	1051.5	1055.1	1046.2
Do. of the serum,	-	1025.5	1026.8	1023.6
Water	-	801.6	—	—
Globules	-	111.8	127.1	87.7
Albumen	-	66.1	68.8	62.4
Fibrin	-	3.5	4	2.5
Extractive matters and free salts	-	6.6	8.7	4.7
Fatty matters	-	1.922	2.519	1.158
Seroline	-	Varia.	0.108	0.018
Fatty phosphorated matter	-	0.646	0.863	0.381
Cholesterine	-	0.061	0.225	0.030
Soapy matter	-	1.195	1.323	0.737

1000 grammes of calcined blood.

		Mean.	Max.	Min.
Chloride of sodium	-	3.2	3.9	2.3
Soluble salts	-	2.4	2.8	1.8
Phosphates	-	0.425	0.690	0.282
Iron	-	0.449	0.490	0.370

The following conclusions may be deduced from this table:—In pregnancy, when not far advanced, and when it has not yet exerted any sensible influence on the constitution, the blood may not be obviously altered, but it becomes sensibly modified as pregnancy advances. The other conclusions that may be deduced have been already stated by anticipation. Although all the pregnant women whose blood was analyzed, had it impoverished, they were nevertheless all plethoric; all complained of headache, vertigo, tinnitus aurium, some of them were somnolent, and generally depressed, and they were all decidedly relieved by venesection.

II.—Blood in Disease.

The causes that modify the state of the blood, in the opinion of the authors of the memoir, are eight in number, and may be expressed as general laws as follows. It may be premised that MM. Becquerel and Rodier consider that the modifications of the blood that occur in disease are the consequences and not the cause of the disease; excepting two important cases in which the modifications of the blood are the source of the malady—namely, most diseases caused by

marsh miasmata and certain fevers, such as typhoid and yellow fever and the plague.

FIRST LAW.—*The mere fact of the development of a disease almost always decidedly modifies the composition of the blood; this modification is almost always the same in most cases.*

When an acute disease is entirely local, the composition of the blood is not affected. But if it produces constitutional disturbance either primarily or secondarily, then the blood becomes modified from the mere fact of the individual being unwell. They have deduced the fundamental modification produced in the blood from 120 analyses of the blood first abstracted from persons labouring under well determined diseases—bronchitis, pneumonia; pleurisy, acute rheumatism, typhoid fever, tubercular phthisis, &c. The results obtained in man and woman are stated separately, because of the great difference in the composition of the blood in the two sexes. The two following tables represent pretty accurately the mean modifications in the blood from the mere fact of an individual being affected with disease. The quantity of fibrin is not stated in the table, as the modifications of that principle are subject to other and much more complicated influences which must be hereafter considered:—

Mean composition of the blood in acute diseases.

		Man.	Woman.
Density of defibrinated blood	- - -	1056	1055
Do. of serum	- - -	1027	1026
Water	- - -	800	804
Globules	- - -	125	118
Albumen	- - -	66	65
Extractive matter and free salts	- - -	7	7.5
Fatty matter	- - -	1.700	1.700
Seroline	- - -	Variable.	Variable.
Phosphorated matter	- - -	0.560	0.600
Cholesterine	- - -	0.110	0.130
Soapy matter	- - -	1	0.900

1000 grammes of calcined blood.

Chloride of sodium	- - -	3.1	3.0
Soluble salts	- - -	2.6	2.5
Phosphates	- - -	0.450	0.450
Iron	- - -	0.500	0.490

From a comparison of those two tables we may conclude—that the development of disease causes a diminution of the density of defibrinated blood—diminution of the density of the serum—very marked diminution of the globules—sensible but less decided diminution of the albumen, (and which do not appear in the table, because of the numerous phlegmasiae among the 120 cases)—slight increase of the sum of the fatty matters—obvious increase of the insoluble phosphates—no change in the proportion of extractive matters, animal soap, soluble salts, or iron, which is always proportional to the globules. The means set forth in the tables are not constant but fluctuate. 1. When the disease is slight, or does not react on the entire system, or when the blood is abstracted very early in the disease, in which cases the blood may be but slightly altered—a proof that the alteration in the composition of the blood is a consequence, not a cause, of disease. 2. On the other hand, when the malady is intense, or the blood drawn at an advanced stage of its progress, the alterations are more decided.

SECOND LAW.—*Bleeding exerts a remarkable influence on the composition of the blood, the greater the oftener the bleeding is repeated.*

MM. ANDRAL and GAVARET established that the chief effect of loss of blood is to diminish the proportion of the globules. The researches of MM. B. and R. confirm this statement. The three following tables show the results of the first, second, and third venesectiōn performed on a certain number of M. Cruveilhier's patients. Ten patients were bled twice, and 10 thrice, which gives 20 first and second, and 10 third bleedings:

Mean composition of the blood in 20 patients bled twice.

			1st venesection.	2d venesection.
Density of defibrinated blood	-	-	1055	1051.2
Do. of serum	-	-	1026.1	1025.3
Water	-	-	796.2	812
Globules	-	-	125.4	112
Albumen	-	-	62.2	62.5
Fibrin	-	-	3.7	3.8
Extractive matter and free salts	-	-	6.8	7.6
Fatty matter	-	-	1.657	1.560
Seroline	-	-	0.027	0.047
Phosphorated matter	-	-	0.490	0.465
Cholesterine	-	-	0.178	0.150
Soapy matter	-	-	0.962	0.900

1000 parts of calcined blood.

Chloride of sodium	-	-	-	2.8
Soluble salts	-	-	-	2.7
Phosphates	-	-	-	0.435
Iron	-	-	-	0.527

Mean composition of the blood in 10 patients bled three times.

		1st venesection.	2d venesection.	3d venesection.
Density of defibrinated blood	-	1056	1053	1049.6
Do. of serum	-	1025.8	1026.3	1025.6
Water	-	793.2	807.7	823.1
Globules	-	129.2	116.3	99.2
Albumen	-	65	63.7	64.6
Fibrin	-	3.5	3.8	3.4
Extractive matter and free salts	-	7.7	6.9	8
Fatty matter	-	1.662	1.584	1.530
Seroline	-	0.026	0.088	0.012
Phosphorated matter	-	0.637	0.489	0.450
Cholesterine	-	0.106	0.156	0.149
Soapy matter	-	0.893	0.851	0.919

1000 parts of calcined blood.

Chloride of sodium	-	-	2.8	3.5
Soluble salts	-	-	2.6	2.5
Phosphates	-	-	0.404	0.493
Iron	-	-	0.513	0.471

As blood is abstracted, that fluid becomes impoverished and more watery, whence the density of defibrinated blood diminishes notably; the albumen also diminishes, but usually only slightly so, whence the diminution of the density of the serum is small; the fibrin is quite uninfluenced by venesection; the extractive matters and free salts are unaltered; the fatty matters are slightly lessened; the seroline, always variable, decidedly increased in some cases; the cholesterine seemed slightly increased; the chloride of sodium and other salts remained unchanged; the iron diminished slightly, being proportional to the globules.

THIRD LAW.—*Plethora and its accompanying symptoms probably result from an increase of the quantity of blood naturally contained in the system, but not from any alteration in the composition of that liquid, and particularly not from an increase of the proportion of its globules.*

MM. AMUSSAT and GAVARET attribute plethora to an increase in the proportion of globules naturally contained in the blood. The numbers on which they found this opinion cannot be questioned, but are wrongly interpreted. Undoubtedly, if the number they adopt 127-1000, as representing the quantity of fibrin naturally contained in the blood were correct, their conclusion would be legitimate; but we think we have shown that the above number is too low, and we thence conclude that the numbers which they give as expressing the proportion of globules in plethoric blood indicate healthy blood. From our experiments we conclude

that in plethora the composition of the blood remains natural. Six men presenting all the characters of plethora were bled; they were, respectively, 24, 27, 28, 35, 38, and 48 years old. A plethoric woman, 21 years of age, was also bled. The following table exhibits the mean composition of the blood of those six men and one woman:—

			Mean of 6 men.	1 woman.
Density of blood defibrinated	-	-	1059	1059
Do. of serum	-	-	1028.3	1028.8
Water	-	-	780.4	784
Globules	-	-	138	131.5
Albumen	-	-	72.3	75.1
Fibrin	-	-	2.4	2.1
Extractive matter and free salts	-	-	6.3	5.8
Fatty matter	-	-	1.555	2.150
Seroline	-	-	Variable.	0.025
Phosphorated matter	-	-	0.433	0.673
Cholesterine	-	-	0.088	0.144
Soapy matter	-	-	1.014	1.038
1000 parts of calcined blood.				
Chloride of sodium	-	-	3.7	3.5
Soluble salts	-	-	2.9	2.8
Phosphates	-	-	0.341	0.334
Iron	-	-	0.547	0.544

The means in this table are exactly the same as those of healthy blood, excepting a slight increase of the proportion of albumen. The examination of each particular case confirms this result, which, however, seems unimportant, the increase is so slight. The proportion of fibrin was very irregular in the six cases; in one it was natural (2.2); in three it was much increased (3.2, 3.5, 3.5); in two, finally, it was very deficient (1 and 1.1); the two latter individuals were very robust, and presented but moderate symptoms of plethora.

FOURTH LAW.—*A diminution of the proportion of the globules of the blood characterizing anaemia, frequently occurs in diseases either as an essential character of disease, or as a complication or a consecutive phenomenon.*

The general condition termed anaemia occurs in—1, chlorosis; 2, after repeated bleedings or copious hemorrhages; 3, after a considerable evacuation of any of the fluids, as from copious diarrhoea or suppuration; 4, in poisoning by lead, and during protracted intermittent fevers; 5, during convalescence from debilitating diseases; 6, in ill-fed persons; 7, in individuals inhabiting damp unhealthy localities.

The following table gives the result of 35 analyses of the blood, showing its mean composition in as many cases of anaemia, developed from various causes, in all of which there existed a continued or intermittent bruit de soufflet in the carotids, which, according to the researches of MM. Andral and Gavaret, necessarily occurs whenever the proportion of the globules sustains a certain diminution. We shall hereafter consider whether the bruit de soufflet can exist without the proportion of globules being diminished:

			Mean.
Density of defibrinated blood	-	-	1047.4
Do. of serum	-	-	1017.1
Water	-	-	822
Globules	-	-	94.7
Albumen	-	-	68
Fibrin	-	-	3.5
Extractive matter and free salts	-	-	8
Fatty matter	-	-	1.806
Seroline	-	-	Variable.
Phosphorated matter	-	-	0.663
Cholesterine	-	-	0.110
Soapy matter	-	-	0.992

1000 grammes of calcined blood.

Chloride of sodium	-	-	-	-	-	3.5
Soluble salts	-	-	-	-	-	2.4
Phosphates	-	-	-	-	-	0.545
Iron	-	-	-	-	-	0.366

It thus appears—1st. That there is considerable diminution of the density of the blood when defibrinated, which is explained by the diminution of the globules; 2d, that the serum retains its density, the albumen not being diminished; 3d, that the globules are decidedly diminished; 4th, that the fibrin is slightly increased (3.5 instead of 2.2).

FIFTH LAW.—*The development of phlegmasia causes remarkable modifications in the composition of the blood, especially a considerable increase of fibrin.*

This law has been already established by MM. Andral and Gavaret, and is fully confirmed by the results of our researches, as set forth in the following table, which gives the means obtained from the analysis of blood in a considerable number of cases of well marked inflammation. The marked difference that exists between the two sexes renders it necessary to tabulate the results in two separate columns:

				Males.	Females.
Density of defibrinated blood	-	-	-	1056.3	1054.5
Do. of serum	-	-	-	1027	1026.8
Water	-	-	-	791.5	801
Globules	-	-	-	128	118.6
Albumen	-	-	-	66	65.8
Fibrin	-	-	-	5.8	5.7
Extractive matter and free salts	-	-	-	7	7
Fatty matter	-	-	-	1.742	1.669
Seroline	-	-	-	0.020	0.024
Phosphorated matter	-	-	-	0.602	0.024
Cholesterine	-	-	-	0.136	0.130
Soapy matter	-	-	-	0.984	0.014

1000 grammes of calcined blood.

Chloride of sodium	-	-	-	3.1	3.0
Soluble salts	-	-	-	2.4	2.7
Phosphates	-	-	-	8.448	0.344
Iron	-	-	-	0.490	0.480

The fibrin and cholesterine are increased; the albumen is diminished in quantity. Recent researches tend to lead to the idea that fibrin and albumen are identical, or at least that fibrin is derived from albumen. May not, then, the increase in the quantity of fibrin observed in inflammations be explained by the transformation of a certain quantity of albumen into fibrin? This question can be elucidated by seeing whether the sum of the augmented fibrin and diminished albumen in inflammations equals the sum of the albumen and fibrin in healthy blood. In the healthy male the sum of those two principles gives 71.5; in the female 72. If we add these two principles in the blood drawn in inflammations, we get the numbers 71.6 in man, and 70.5 in woman: those numbers nearly correspond in man, but differ in woman.

SIXTH LAW.—*The proportion of fibrin in the blood may diminish, and its physical properties may perhaps be changed by a number of circumstances referable to two classes. 1. Poisoning, including typhus, yellow fever, and intermittent fevers, the plague, &c. 2. Insufficient nutrition; but this diminution does not necessarily occur.*

[The authors of the memoir say generally that they have found this proposition confirmed by their researches, the results of which are not given numerically.]

SEVENTH LAW.—*When a secretion is suspended or diminished it often occurs that a certain number of the principles contained in the secretion in question are concentrated in the blood.*

[In support of this law, the authors of the memoir refer to the experiments of MM. Dumas and Prevost, who found that on tying the ureters of animals, and thus suppressing the secretion of urine, the blood on analysis yielded urea. They

also refer to a fact which they have themselves ascertained—namely, that whenever the secretion of bile is suppressed, or even diminished, the quantity of cholesterine in the blood increases.]

EIGHTH LAW.—*The albumen of the serum of the blood diminishes considerably under these circumstances; Bright's disease—certain diseases of the heart, accompanied with dropsy, and grave puerperal fever.*

The developments of this proposition are reserved until the diseases here mentioned are considered. The number of facts examined are too few to warrant as yet the positive enunciation of this law, which, however, we believe to be true.

MM. Becquerel and Rodier next consider at great length the composition of the blood in various diseases, and compare their results with those obtained by other observers, especially by MM. Andral and Gavaret, and conclude by the following summary of their researches. The numerous and important results contained in this memoir are of three kinds; some are simply confirmations of the discoveries of our predecessors; others invalidate, in part at least, results hitherto generally admitted; others, again, are entirely new. Those three classes of results may be thus summed up:—

a. We have confirmed the following results.

1. Increase of fibrin in the phlegmasiae, as established by MM. Andral and Gavaret.

2. Diminution of the globules in chlorosis, in anaemia, and under the influence of protracted abstinence—a fact ascertained by M. Lecanu, and confirmed by MM. Andral and Gavaret.

3. Diminution of the globules after hemorrhage, as first indicated by MM. Dumas and Prevost, and confirmed by MM. Andral and Gavaret.

4. The trifling influence of venesection on the fibrin.

5. The diminution of albumen in Bright's disease, pointed out by Gregory, Bostock, Christison, Andral and Gavaret.

b. Results which our experiments seem to invalidate.

1. The number 127-1000, stated to represent the general mean of the globules during health, is too low, and the mean is not the same in the two sexes.

2. The number 3-1000, supposed to represent the fibrin, is too high.

3. The supposed augmentation of the globules in plethora, affirmed by M. Lecanu, and admitted by MM. Andral and Gavaret, is erroneous.

4. The supposed, almost constant, diminution of the proportion of fibrin in bad fevers, is also a mistake.

11. Composition of the Urine.—In a highly interesting paper on the constitution of the urine, Liebig* maintains the following points:

A. That neither lactic acid nor any lactate exists in healthy urine; the evidence being, 1, that hitherto no example is known of lactic acid being produced by the decomposition of a nitrogenous substance; 2, that the urine of the herbivora, in which lactic acid or its salts might be expected, (if they existed in that of the carnivora,) does not contain either; 3, that lactic acid has never yet been clearly detected in the urine of men or carnivora; 4, that the carnivora take no food from which lactic acid could, by transformation, be produced; 5, that fresh urine will not dissolve the smallest quantity of barytes, though lactate of barytes is easily soluble in water; 6, that in various and the most careful experiments, it has been impossible to detect even a trace of lactic acid in large quantities of putrid urine, in which, if it had existed when fresh, it could not have been altered by putrefaction, and if it had not existed when fresh, it might, perhaps, have been produced by putrefaction. An organic acid was produced in putrefaction, but it was acetic acid combined with a resinous highly azotised substance.

B. Hippuric acid is a constant constituent of healthy human urine; for 1, benzoic acid is obtained (as Proust observed), with acetic acid, by distilling urine with sulphuric or hydrochloric acid; but, 2, this benzoic acid cannot exist as such in the fresh urine; for benzoic acid is converted in the organism into hippuric acid; and the hippuric acid known to exist in the urine of herbivora yields benzoic acid when it is decomposed; and 3, the existence of hippuric acid may be clearly

* Ann. der Chemie und Pharm., Mai; and Lancet, June 1-8, 1844.

proved in even small quantities of fresh urine, by evaporating it to the consistence of syrup, mixing with it some hydrochloric acid, and agitating it with ether, which dissolves the hippuric acid.*

The hippuric acid thus obtained, cannot be derived from the decomposition of benzoic acid taken in the food, (for probably none of man's food contains any;) it is formed in the body from the non-nitrogenized aliments. The acetic acid does not exist in fresh urine; but it and the resinous substance with which it is combined may be regarded as the products of the decomposition of the colouring matter of the urine.

c. The acid reaction of healthy urine is due to the presence of the acid phosphate of soda, and the mode in which this salt is produced is as follows: alkaline phosphates are taken in meat, flour, and grains; none of these contain any free alkali; and it is from these phosphates and not from any free alkali or alkaline carbonate, that the chyle, lymph, and blood, derive their alkaline reaction. Now, among the remarkable properties of the bibasic phosphates of soda and potass are their relations to uric and hippuric acids. Both these acids dissolve very easily in water, to which common phosphate of soda has been added, and with their solution, the phosphate loses its alkaline, and assumes an acid reaction. And thus, when the uric and hippuric acids are formed in the organism, they combine with the soda of the alkaline phosphate, forming the highly soluble urate and hippurate of soda, and an acid phosphate of soda.

D. But besides this, there is another cause by which the acidity of the urine is maintained and increased. The urine of man and the carnivora contains a large quantity of sulphates; but their food does not contain either those salts ready-formed, or any oxygen-compound of sulphur. The sulphur which it does contain, or (which comes to the same thing), the sulphur of the transformed tissues, must therefore combine with oxygen in the body, and the sulphuric acid thus formed, combining with part of the alkali of the alkaline phosphates, converts them into acid phosphates, and thus maintains and increases the acidity of the urine.

E. It follows that whether the urine will be acid or not, depends upon the nature and quantity of the *bases* taken with the food. If the amount be sufficiently large to neutralize the uric, hippuric, and sulphuric acids formed by the organism, and the acids supplied by the food, the urine must be neutral; if the amount be more than enough, the urine must be alkaline; if less, acid. And hence, no physiological or pathological inference can be drawn from our examination of the urine, unless an account be taken of the inorganic acids, salts, and bases taken with the food.

An exception to the rule that carnivora alone produce uric acid exists in the case of butterflies, (and other lepidoptera?) Heller has discovered that in proportion to the weight of their bodies, they of all animals produce the greatest quantity of uric acid. Their urine is analogous to that of serpents and predatory birds, containing as a chief constituent urate of ammonium; it is principally a product of the metamorphoses which go on in the pupa state, and the red or yellow fluid which they discharge soon after being hatched is chiefly urate of ammonia. The secretion continues in after life.†—PAGET's Report in *B. & F. Med. Review*, April, 1845.

12. *Use of Gelatin in food.*—The Amsterdam commission for determining the nutritive properties of gelatin as obtained from bones by steam, and used in large quantities in "economic soup" in Dutch public institutions, have confirmed the conclusion of the commission of the Paris Institute, that it has had hardly any nutritive properties when taken alone; and, in regard to the important point left unsettled by the French commission, namely, whether, when added to other kinds of food, gelatin contributes to the total amount of nutriment, they have also come to a negative conclusion. None of the three dogs to whom considerable quantities of it

* Liebig estimates the quantity of benzoic acid in the urine to be equal to that of the uric acid. Dr. Golding Bird has never found it exceed one-third of the quantity of the latter. (*Med. Gazette*, Aug., 23, 1844.)

† *Oesterreische Med. Wochenschrift*, Sept. 14, 1844.

were, for several long periods, given both alone and in connection with bread and potato-parings, was found to have derived the least benefit, or to have gained any increase of weight from it.

[The experiments were accurately enough made, and warrant the conclusions, as far as "economic soup" and dogs are concerned. But they are so opposed to the results of common observation of the nutritive value of jellies and other like gelatinous food, that some fallacy must be suspected in both these and those of the French commission. Either dogs are improper subjects for such experiments, or, more probably, the mode of preparation decomposes the gelatin. The action of the hot steam to which the bones, already boiled, are subjected for about seven hours in each of several days, may effect a part of the change by which, when it is complete, gelatin loses its power of *setting*, and in which the arrangement of its elements may be so altered, that they cannot be reconstructed in a nutritive form.]—*Ibid.*

MATERIA MEDICA AND PHARMACY.

13. Digitaline.—M. BOUCHARDAT, in his *Annuaire de Thérapeutique* for 1845, has given an interesting account of digitaline, the active principle of the digitalis purpurea discovered by MM. HOMOLLE and QUEVENNE:

1st. Process of extraction.—One kilogramme of dried leaves of digitalis of the same year's growth, coarsely powdered, and previously moistened, is placed in a displacement apparatus, with carded cotton in the centre, and then treated with cold water, so as to obtain a concentrated solution. The liquids are immediately precipitated by a slight excess of the subacetate of lead, and thrown upon a filter. They pass through limpid, and almost completely colourless. A solution of the carbonate of soda is then added until there is not any precipitate thrown down, and the filtered liquid is freed from the magnesia which it still retains by means of the ammoniacal phosphate. The filtered solution is again precipitated by an excess of tannin, and the precipitate collected on a filter is mixed, while yet moist, with one-fifth part of its weight of oxide of lead (litharge). The soft paste which results, placed between unguammed papers, then dried at the stove, and powdered, is exhausted by concentrated alcohol in a displacement apparatus. The alcoholic solution, decolorized by means of animal charcoal, leaves, as a residuum of evaporation, a yellowish granular mass, which, washed with a little distilled water, drained, and redissolved by boiling alcohol, deposits on the sides of the capsule on evaporation, the digitaline in a nipple-like granular form. Drained and dried, the digitaline ought still to be twice washed with boiling concentrated ether, which separates from it, among other substances, a white crystalline matter, and traces of green matter and of the odorous principle.

2d. Physical and chemical characters.—Digitaline, obtained and purified by the process which has just been described, presents itself in the form of a white, inodorous powder, and of an excessively bitter taste, which is especially experienced in the fauces; it is capable of causing violent sneezing when it is disseminated in very small particles in the air. Scarcely soluble in cold water; rather more so in boiling water: it is dissolved, in all proportions, in weak or concentrated alcohol. Pure ether only dissolves traces of it, but the slightest addition of alcohol considerably increases its solvent power. Completely deprived of either acid or alkaline reaction, digitaline is not susceptible of any combination with the acids or with the bases. Concentrated sulphuric acid dissolves it, colouring it with a deep hyacinth red; the solution, diluted with water, becomes green, and flakes are separated. Concentrated nitric acid changes it to a yellow colour, and dissolves it, depriving it of its bitterness. Hydrochloric acid colours it green. Ammonia and caustic soda colour it a yellow-brown. It does not contain any nitrogen.

3d. Physiological and therapeutic properties.—MM. Homolle and Quevenne have found its action on the dermis denuded by a blister so irritating as to forbid, they conceive, its endermic use. From experiments on their own persons, MM. H. and Q. have found the action of the digitaline on the heart to be always manifest,

and that it is commonly shown by a progressive diminution in the number of its pulsations, which have been lowered in some cases to 40, and generally to 50 or 55 in the minute. One of them could not take more than from four to six milligrammes (5-50ths to 6-50ths of a grain) in the four-and-twenty hours without the supervention of intolerance. This intolerance was evidenced by nausea, borborygmi, efforts at vomiting, then obstinate vomiting, continuing even after the digitaline has ceased to be exhibited. Inequality, irregularity and intolerance of the pulse, have often been observed after the digitaline has been given for eight or ten days. Its influence on the circulation appears to continue for several days after its exhibition has ceased.

The phenomena observed with respect to the digestive functions have consisted in an increase of the appetite, soon followed by a dragging sensation at the stomach; then arise borborygmi, abdominal pains with disengagement of the intestinal gas, and constipation, followed in some cases by diarrhoea. The diuretic action has been very irregular, and the renal function has been sometimes diminished for a short time. They observed, as the phenomena resulting from its action on the nervous centres, cephalalgia, giddiness, muscular weakness, soon followed by general prostrations, gaping, shivering, and sometimes an uncomfortable degree of heat in the hands and feet. Sleep has not appeared to be influenced by the digitaline.

Exhibited in a very serious case of anasarca, consecutive on an unfortunate confinement, and complicated with pericarditis and hematuria, the digitaline caused an enormous and immediate diuresis, accompanied by a considerable lowering of the pulse, which in forty-eight hours fell from 120 to 54 in a minute. The absorption of the infiltrated serosity was effected very rapidly, and the treatment proved successful. In two cases of pleurisy the diuretic action was evident, and the absorption of the effusion seemed to be hastened. In several cases of phthisis, digitaline diminished the frequency of the pulse and of the respiration, quieted the cough, increased the appetite, diminished the thirst, and arrested the diarrhoea. In cases of nervous palpitation, its action was variable, but often beneficial. In affections of the heart, with disease of the valves, causing a considerable disturbance in the hematosis and the circulation, with a feeble, tumultuous, unequal, irregular pulse, oedema, oppression, cough, and stasis of the venous blood, its action has always been useful. In two cases of acute affection of the heart—endocarditis with hypertrophy of the ventricles—it was injurious by increasing the impulse of the heart and the strength of its pulsations. Finally, in a case of pericarditis with effusion, it was evidently serviceable, by diminishing the frequency of the pulse and the oppression, by increasing the urinary secretion.

Digitaline is, in the first place, according to MM. H. and Q., a wonderful modifier of the central organ of circulation, regulating its disordered action, and bringing it back to the normal type, and nevertheless, singularly enough, disordering, by a prolonged administration or by excessive doses, that function which it renders irregular and intermittent.

MM. BOUCHARDAT and SANDRAS have also instituted a number of experiments on digitaline, and it results from these experiments, they observe, "that digitaline is an *excessively active substance*, especially when it is pure. It acts with violence, not only when it is injected directly into the veins, but also when it is taken into stomach. It singularly modifies the circulation, and is capable of irritating the digestive organs in a high degree when it is applied to them. These experiments, then, having sufficiently enlightened us as to the energy of the principle extracted from the leaves of the *digitalis purpurea*, we were next desirous to ascertain the results that might be expected from so powerful a remedy when given in proper doses. It was, above all, important to obtain a correct knowledge of the action of this poison on the circulation, at the same time avoiding to excite the irritation which it is able to cause in the digestive apparatus. With this object in view we prepared pills, containing a tenth of a grain of digitaline, by means of mucilage and marshmallow powder. We exhibited these pills to patients in whom a greater slowness of circulation might be useful, and whose state did not allow us to fear any injurious results from the use of an agent capable of irritating the digestive canal. In these conditions we have observed

important modifications of the circulation. All our patients had a marked slowness of pulse. It was felt before the experiments were commenced; it was felt again five or six hours after the administration of one of the digitaline pills; and again the next morning. We found that the greatest depression of the pulse took place in general some hours after the exhibition of the medicine. It was then found in several instances to be diminished in frequency to the extent of nearly one-half the normal condition; it was, however, very often only one-third or one-fourth. The next morning it became rather more frequent, but it always remained from ten to more beats below the normal pulse. For example: in a young epileptic girl, whose pulse, habitually unequal, varied from 80 to 120, we have frequently found it only 50 in the minute under the influence of digitaline. A man, fifty years of age, who had been several times the subject of apoplexy, and whose pulse was never higher than 48, several times had it reduced to 36. A woman, fifty years of age, phthisical to the last degree, and often troubled with haemoptysis, with a pulse generally from 120 to 131, has had it fall to 96 or 94. A woman, in whom we were desirous to increase the urinary secretion, had the pulse reduced for several days from 120 to 128 beats to 92, 88, or 85. In all these cases we found that the action of digitaline on the circulation was shown not only by a diminution of the frequency of the pulse, but also by its irregularity. This irregularity appeared to us to be of two kinds; the internal of the pulsations was unequal; this was the most remarkable irregularity; else the character of the pulse was altogether different, the pulsation being one while hard and very quick, at another hard and prolonged; it is sometimes soft at intervals, else it continually preserves that character. Almost all the cases which we have noticed have shown analogous results.

Only one of our patients mentioned any modification in the urinary secretion, and we were not able to attribute that fact to any other appreciable cause than the exhibition of the medicine. But, besides this physiological phenomenon, there were others, of which it is important to take note. Several patients have complained of disorders of the senses, light-headedness, annoying dreams, and hallucinations. These phenomena always occur at the commencement of the toxic effects of digitaline. They were soon followed by more or less frequently repeated diarrhoea or bilious vomiting. When this has occurred, we have, of course, always stopped the use of the medicine; but, in spite of all the precautions which could be adopted, the vomiting sometimes lasted for two or three days. The appetite was lost at the same time, and quietude and time were required to re-establish the digestive functions. The toxic effects of the digitaline were not generally produced at first; for the first two or three days it seemed as if the patient had not taken any thing out of the way; but suddenly, and without any previous warning, the effects of the ingested substance began to show themselves. The slowness of the pulse became then most marked. If its use be continued, the pulse becomes yet slower under its influence, but at the end of some hours it again becomes frequent, doubtlessly induced by the irritation of the digestive organs, which this singular body does not fail to produce.

En résumé, digitaline is one of the most active vegetable substances we are acquainted with. The attentive and sustained study of its effects on the circulation might furnish some useful indications for practice; but at present we believe it to be our duty rigorously to declare that it is an agent of exceeding energy, the action of which must be attentively supervised, its sudden toxic power being especially to be feared, notwithstanding the security in which the medical attendant is left for several days. Digitaline possesses exactly all the active properties of digitalis; this new substance may, therefore, be of service in all those diseases where digitalis has been employed with success, and the medical man may always know correctly the quantity of the active principle which he employs.

4th. Dose and mode of administration of digitaline.—The dose and mode of administration of this most energetic agent require the greatest circumspection. MM. Homolle and Quevenne from comparative essays have found that four milligrammes of digitaline correspond, in regard to energy of action, to about eight grains of the powder of digitalis purpurea, prepared with the greatest care, and taken in a state of purity.

5th. Pharmaceutical preparations.—MM. Homolle and Quevenne recommend

the following preparations as the most convenient forms for administering digitaline:—

a. *Granules of digitaline*.—One gramme of digitaline, fifty grammes of white sugar, for a thousand granules, which are to be prepared in the same manner as the aniseed of Verdun. These granules, containing each a milligramme (one-fiftieth of a grain) of digitaline, may be exhibited in the dose of from four to six in the course of the twenty-four hours.

b. *Syrup of digitaline*.—Two grains of digitaline, 1500 grammes of simple syrup. The digitaline is to be dissolved in alcohol, and then added to the syrup. This syrup contains one milligramme of digitaline in every fifteen grammes of syrup. Dose, from four to six spoonfuls in the course of the day, pure, or in a glassful of an appropriate infusion.

c. *Digitaline mixture*.—Five milligrammes of digitaline, 100 grammes of distilled lettuce water, twenty-five grammes of syrup of orange flowers. Dissolve the digitaline in a few drops of alcohol, and add the distilled water and the syrup. To be taken by spoonfuls in the four-and-twenty hours.—*Pharm. Med. Times*, April, 1845.

14. *Valerianate of Quinine*.—Dr. DEVAY, in a memoir on this article in the *Gazette Médicale de Paris*, (19th Oct., 1844,) extols this salt as superior to the sulphate of quinine. The following is the mode of preparing it. To a concentrated alcoholic solution of quinine, valerianic acid in slight excess is added; the solution is diluted with twice its volume of distilled water and the whole well stirred, and then placed in a sand bath, the heat of which does not exceed 50° R. When the alcohol is evaporated, the valerianate of quinine presents itself in beautiful crystals, and which increase from day to day.

As this salt is easily decomposable, M. Devay gives it in the most simple form, generally in a solution of gum Arabic. The dose is from ten to forty centigrammes, nearly from two to seven and a half grains, during the apyrexia.

MEDICAL PATHOLOGY AND THERAPEUTICS AND PRACTICAL MEDICINE.

15. *On the minute structure of the Lungs and the formation of Pulmonary Tuberclæ; with some Observations on its detection by a microscopical examination of the sputa*. By GEORGE RAINES. (*Royal Med. & Chirurg. Soc.*, March 25, 1845.)—The author, in his prefatory remarks, observes that it is not his intention to introduce any new speculations on the structure, functions, and pathology of the lungs, but only to bring forward such facts as readily admit of verification by the microscope, and to deduce from them what he considers obvious and legitimate inferences.

He divides his subject into four parts: 1st, the anatomy of the lungs as applicable to their physiology; 2d, with reference to their pathology; 3d, the mode of formation of tubercle; and lastly, its detection by a microscopic examination of the sputa.

The first division contains a general description of the lungs of the reptile, showing the alterations they undergo as they approach in complexity the same organs in the mammal. The principal difference between the lungs of reptiles and mammals is the existence of a double layer of vessels between contiguous air cells in the former, and only a single one in the latter.

The author showed that a great difference of vascularity exists in the different parts of the same lung, those parts being least vascular which are furthest from the principal air tubes; consequently, the quantity of blood requiring the influence of the inspired air is adapted to the diminution of oxygen in the remote cells; in which he considers the renovation of their contents is due more to the law of diffusion than to mechanical dilatation and contraction of the chest.

The author describes minutely the manner in which the bronchial passages communicate with the air cells and with each other; the actual terminus of a bronchial passage being itself a cell at the surface of a lobule, or several cells connecting one bronchial passage with another. It is further shown that each

plexus of capillaries is situated in a fold of membrane forming the immediate wall of the air cells; hence the author infers there must be cellular tissue in the lungs connecting these folds of membrane together.

He combats the opinion of Mr. Addison with respect to the non-existence of air cells in the foetal lung, and shows by microscopic preparations that this opinion must be erroneous. He is inclined to deny the existence of muscular structure in the minute bronchial tubes, both from the absence of any thing like muscular fibre in the pulmonary membrane, and also from the fact that the connection of the bronchi with the cells appears to be such as not to admit of any constriction of these passages, even were muscular fibre present.

A description is next given of the manner in which tubercle is formed by the deposit of tubercular matter in the air cells, occasioning by its pressure absorption of the intervening capillary plexuses, the membrane still remaining. The author remarks that the vessels close to a tubercle, and even those of the cells in which the deposit is not sufficient to cause their obstruction, retain perfectly their natural character, while those near to the cells filled with fibrin from inflammation have a tortuous and knotted appearance; hence he thinks the deposit is not the result of inflammation, but merely an altered secretion. The observations on the formation of tubercle are confined to those of which the author has had the best opportunities of examining. He considers that it is only in preparations of the injected lung that the exact extent and situation of tubercular matter can with certainty be ascertained: he offers no opinion respecting miliary tubercle, having only once examined it; but the facts respecting the formation of common tubercle the author considers are unconnected with the consideration of any other form of phthisis, inasmuch as his preparations exhibit the tubercular deposit in all the different stages of common tubercle, from a quantity so small as to fill only a small part of a cell, up to that filling one, two, or even an indefinite number of cells: in all these preparations the tubercular deposit exhibits the same microscopic character.

Lastly, (from the fact that the pulmonary membrane does not become absorbed) the author proposes a method of detecting tubercular matter by a microscopic examination of the sputa. Although the observations he has made are not sufficient to enable him to speak with confidence of the practicability of this mode of diagnosis, in one instance he succeeded in detecting the pulmonary membrane in tubercular matter washed from the trachea of a phthisical patient, with perfect ease and certainty.

Dr. C. J. B. Williams could not assent to the portion of Mr. Rainey's paper on the pathology of the lung, especially in reference to the surface of the air cells being the primary seat of the deposition of tubercle. To discover this seat in so fine an organ as the lung it was necessary to investigate a number of cases of the deposition of tubercle in its very early stage, before it had accumulated and made its way through the epithelium to the free surface of the cells. Mr. Rainey, however, acknowledged that he had examined one specimen only of miliary or incipient tubercle. On the contrary, Mr. Gulliver had unequivocally detected the opaque granular matter of tubercle in many cases in the walls of the cells, and, indeed, the plexus of vessels itself. Some of Mr. Addison's remarks were to the same effect, but he, like Mr. Rainey, had conceived the idea that tubercle was essentially altered epithelium. That tubercular matter, however, was not an altered condition of the mucous membranes was proved sufficiently by the circumstance that tubercles were found in the parenchymatous structure of organs that were without mucous membrane; such, for instance, as the spleen, the brain, in serous membranes, and in blood-vessels. He believed that the nature and origin of tubercle might be easily explained in another manner. Mr. Rainey, in his observations on the obliteration of the blood-vessels of the lung by tuberculous deposit, had been forestalled by several physiologists, particularly by M. Nalatis Guillot, whose researches proved that the obliterated vessels were often compensated by anastomosing vessels, not only in the remaining healthy texture of the lung, but also in the pleura, and even in the outer wall of the chest itself through adhesions to the costal pleura. This fact clearly explained how it was that a few leeches, or a blister applied to the walls of the chest, often afforded such great relief in phthisis. He (Dr. W.) was surprised that the author had thought it

necessary to make any observations with the view of disproving the muscularity of the pulmonary texture, the non-existence of which had been sufficiently established by his (Dr. W.'s) researches and experiments. These experiments had shown that galvanism produced no contraction in the vesicular part of the lungs, although the contractions of this agent were most evident in the bronchial tubes. He thought little of Mr. Rainey's microscopic test of the sputa. This test could only be applied during the latter stage of the disease, and after many other unequivocal signs had decided the true nature of the disease.

Dr. Colding Bird remarked, that Mr. Rainey appeared to have arrived at the conclusion that the lining membrane of the air cells was truly a mucous membrane. Its pathology, however, would not seem to warrant such a conclusion. A mucous membrane during inflammation secreted mucus destitute of pus or coagulable albumen; but the lining membrane of the air cells, in common pneumonia, poured out a quantity of albumen, and hence the scanty yellow, or rust-coloured sputa of pneumonia, coagulated when heat was applied. In the condition of gray hepatization, also, occasionally, in persons of weak power, left long after the subsidence of the acute stage, the cells were full of a substance resembling in every particular coagulated albumen. Hence, although anatomically the lining membrane of the air cells could not be considered a serous membrane, its pathology, he believed, approached more nearly to such a structure than to a mucous membrane. He agreed in the remark of Dr. Hodgkin that it was almost impossible to discriminate between the deposit in the air cells resulting from pneumonia, and the so-called tubercle. The microscopic test of the sputa, mentioned by Mr. Rainey, was not a novel one, and even the presence of portions of air cell in the expectorated matter had been pointed out some time since by Dr. Buhlman, of Berne, a pupil of Professor Valentin. He had, in his Thesis on the Microscopical Structure of Expectorated Matter, figured broken air cells as found in the sputa of a phthisical patient, mixed with flakes of cholesterine.—*Lond. Med. Gaz.*, April, 1845.

16. *Amnesia following a blow on the head.*—Dr. PATZE relates, in No. 30 of *Casper's Wochenschrift*, 1844, a case of amnesia in a man 25 years of age, who had been knocked down shortly before Dr. P. saw him, by an oaken plank, eight feet long and three feet thick, which had fallen from a height of eighteen feet upon his head. On examining the skull, which Dr. P. did with great difficulty, in consequence of the patient's opposition, he "found a depression $2\frac{1}{2}$ inches long, by $1\frac{1}{2}$ inch broad, and $\frac{1}{2}$ ths of an inch deep, in the situation of the anterior and superior angle of the right parietal bone. There was no other external injury. The look of the patient was furious, his eyes rolled in his head, and he frequently gnashed his teeth; on his face evidences of bleeding from the nose were apparent; nothing else unusual. The pulse was small, depressed, and so slow that it scarcely beat 60 strokes in a minute. To questions the patient only answered by nodding or shaking his head, and by gestures pointing to his tongue, his neck, and his windpipe, that he had lost the power of speech. His walk was so insecure that he had to support himself by the furniture in the room. He resolutely opposed my preparations to bleed him, drew the form of a leech upon the table with his finger, held up four fingers to indicate the number four, and pointing to the wounded head, indicated that he wished to have them applied there. It cost me great trouble to make him comprehend the greater usefulness of venesection in such circumstances. He made me understand by signs that I should take no more blood from him than a single cupful; when this quantity had flowed, he became impatient, and insisted upon having the arm bound up; I, on my part, wishing to get away a larger quantity of blood, felt the pulse, and used other pretexts to let a larger quantity flow; the by-standers also came to the patient's assistance, and insisted upon my tying up his arm. In my disputes, first with the patient and then with his friends, from twelve to sixteen ounces of blood might have flowed, when the patient suddenly exclaimed "now tie up my arm." This excited great astonishment among the spectators, and I was compelled to yield to his desire, although the frequency and the fullness which the pulse now showed would have led me to leave the vein open for some time longer. The arm was tied up, and the patient put to bed, having a poultice of cold vinegar and water

applied to the part injured, and an aperient mixture of arnica flowers, senna leaves, and sulphate of magnesia, prescribed for him every hour, until free discharges from the bowels should follow. In the evening the bowels had been moved twice; the pulse was free and large, and of proper frequency; the patient only complained of some lassitude, but the speech was slow and haltered when he got at all excited. He had some sleep in the day; the wounded part was hot and moderately painful. Next day the patient was up,—I found him standing by the stove making his poultice. He now questioned the fact of any depression of the skull—he was only aware of some swelling—and showed great disposition to go to work. On the 15th, indeed, in spite of all my dissuasions, he went to work, and has continued very well ever since, although he cannot now get a few feet above the surface of the ground without feeling giddy. By and by he discovered that the skull was actually depressed in the situation indicated.

"He says that he felt himself knocked down by the falling plank, but that he immediately rose again possessed of complete consciousness, and had gone on about five paces, when he fell a second time senseless, nor did he recover himself again until he found himself at home. His anger had been excited by feeling himself without the power of speaking, and the disposition in the by-standers to treat him like a madman: he had a feeling of constriction and stiffness, which extended over the lower jaw, the tongue, and the neck down to the breast; the tongue appeared to have become motionless by its weight and thickness, so that speech would not follow the strongest behests of the will.

"This feeling had gradually become less and less during the blood-letting, and with its entire removal he found that he had recovered his power of articulating." *Lond. Med. Gaz.*, Nov., 1844.

17. Prolonged Sleep occurring at intervals.—Prof. D'OUTREPONT records, in the *Neue Zeitschrift fur Geburtkunde*, (1844,) the following remarkable case.

A woman, 35 years of age, married, and the mother of four children, has been subject, since her marriage, to protracted sleep, which continues from two to seven days, commonly five days and a half, and recurs at irregular intervals. It comes on suddenly, without any precursive symptoms, sometimes at night, at others in the day. The patient awakes partially every twenty-four hours, with a dry mouth, thrusts her tongue out, drinks are then given her, which she swallows unconsciously, and immediately relapses into sleep. The intervals between these prolonged sleeps are from two to twenty days; she does not sleep at all, or has very short, agitated naps. The season and temperature of the air have no effect upon her condition. Menstruation, pregnancy, labour, the lochia, &c., are not disturbed by these sleeps, which is any thing but refreshing, the patient awaking fatigued. She passes neither urine nor faeces during her sleep, nor does she experience a want to do so immediately afterwards. She always awakes spontaneously, and cannot be awakened by any irritation. When her eyelids are separated the balls are found rolled upwards; the pupils do not contract by the sudden exposure to light. Respiration, circulation, and the temperature of the skin are in a normal state both when she is asleep and at other times.—*Gaz. Méd. de Paris*, Jan. 4, 1845.

18. On the Use of Sulphate of Manganese in various diseases. By R. H. GOOLDEN, M. D. (*London Medical Gazette*, Feb. 1845.) In our last No., p. 472, we noticed the suggestions of Mr. Ure relative to the administration of sulphate of manganese in gouty habits. Dr. Goolden states, as the result of his experience with this salt, that "when taken upon an empty stomach, in doses of one or two drachms, it has invariably produced vomiting in less than three hours, and generally within an hour; and the matter vomited has consisted of a very large quantity of yellow bile. After a meal, the same effect has taken place, but not invariably.

"It very rarely acts as a purgative alone, and after it has been exhibited for several days, I have often been obliged to have recourse to other purgative medicines, in consequence of the want of action of the bowels. After the first dose it seldom acts as an emetic. The appetite has invariably increased during its exhibition, and when the first emetic effect has subsided the patient is free from all uneasy sensations, and expresses himself as feeling lighter and easier than before.

"It sometimes leaves a bitter taste in the mouth, which is all that is complained of until the patient vomits.

"The stools, which are sometimes dark-coloured, soon become yellow and loaded with healthy bile; but if its use be continued for four or five days, they become lighter, and at length show a total absence of bile, appearing like jaundiced stools, of the colour of parchment, but there is no jaundice either in the skin or urine.

"If the medicine be discontinued, the yellow colour of the stools returns.

"In one case which was admitted into the Dreadnought with jaundice, and which subsequently died from inflammation of the spleen, with tubercular deposit in that organ, the jaundice very much subsided under the use of the medicine. The liver was healthy, but paler than natural; the gall-bladder quite empty, and the spleen very much enlarged, softened, and loaded with huge masses of tubercles."

19. Great Hypertrophy of the Heart and open Foramen Ovale, without Cyanosis.—(*Dublin Journal*, 1844.) The subject of this case was a child aged four months and fifteen days. No appearance of disease manifested itself until two weeks after birth, when restlessness on lying down, particularly at night, and on the right side, occurred, which was relieved by turning the child over on the left* side, or raising it to a sitting posture. This continued slightly increasing, the general health in other respects good, until within five days of its death, when severe symptoms of catarrh, accompanied with some difficulty of breathing, supervened and terminated fatally. The *post mortem* exhibited no discoloration of the skin; the heart was very much enlarged, but the auricles disproportionately small to the ventricles, the foramen ovale entirely open, so that the little finger passed through it easily; the left lung was of a chocolate colour, very much contracted, lying along the spine.

20. On the Nature and Seat of Hooping Cough. Mr. J. S. STREETER, one of the Presidents of the Physical Society of Guy's Hospital, in an interesting paper on the nature and seat of hooping cough, read before the Physical Society of Guy's Hospital, advocates the views of Dr. Blaud, respecting the nature of that disease.

"Dr. Blaud," Mr. S. observes, "considers the primary cause of the disease to consist in an irritation, not an inflammation, of the mucous membrane of the bronchi, under which the glands and follicles of that membrane pour forth a specific secretion saturated with hydrochlorate of soda, the irritation of which, when it reaches the upper part of the trachea and larynx, throws the muscles of the glottis and of respiration into spasmodic action for its expulsion, in a manner exactly similar to any foreign body which accidentally enters the larynx.

"From this theory of the nature and seat of the disease I so far differ as to regard the primary affection of the bronchial membrane as inflammatory in its nature, and believe that it will be found on careful observation to be attended by more or less fever of an analogous character to that which attends contagious catarrh or influenza; but to that part which views the presence of a saline secretion in the trachea as the proximate cause of the convulsive cough which ushers in the second stage, I give my unqualified assent; because I believe it demonstrably true. When, however, the convulsive hooping is fully established, it very commonly happens that symptoms which mark the third, or what may be appropriately termed the complicated stage, are developed, and continue to mark the varying and formidable phases of the disease which mostly attract attention in practice. These tertiary phenomena usually manifest themselves—1st, as special lesions of the nervous and muscular systems; 2dly, as special lesions of the respiratory organs; or 3dly, as the more general affections of fever and cachexia, and are present in individual cases in every conceivable variety of combination.

"The 1st class comprise—an exalted sensibility, and morbidly susceptible state,

* It may be remarked that this case does not lend any support to the theory of Prof. Meigs, according to which the patient should be relieved by lying on the right side when the foramen ovale is open.

of the membrane of the larynx, the pharynx, the epiglottis, under which death from asphyxia may suddenly occur—morbid association of the action of the muscles of glottis and respiration, in consequence of which the cough continues from mere habit, or is reproduced by the most trivial irritation of the air passages; reflex irritation, often passing into inflammation of the nervous centres of the pneumogastric nerves, involving those of the phrenic nerves also; and finally, these reflex affections may extend to the whole of the brain, or to the medulla oblongata and their meninges, and prove fatal by inducing general convulsions or hydrocephalus. All these, be it observed, are pathological conditions of the nervous system which have been so constantly put forward in high relief by the advocates of the nervous theory as proximate causes of the disease itself.

"The 2d class of tertiary phenomena include the various congestive and inflammatory affections that result from the mechanical disturbance of respiration and circulation, and the extension of the primary bronchial inflammation to the trachea, larynx, and pharynx, and the tissues of the lungs themselves. Epistaxis, haemoptysis, and fatal emphysema from extensive rupture of the air-cells, have occurred within my own experience, and have apparently resulted from the mechanical violence of the cough acting upon tissues previously weakened by disease.

"Of the 3d class I have only to observe, that in the absence of cerebral or pulmonary inflammation, the fever of the third stages is always asthenic, and often assumes a remittent type when the cachexia is of a marasmic character.

"The evidences of the truth of this theory, upon which I place reliance, are—the testimony of adults, who have been attacked by the disease, to the unusual and excessively saline taste of the expectoration so long as the paroxysms are severe—the resemblance of the expiratory efforts in hooping-cough to those made by the excito-motor system, for the expulsion of a foreign body from the larynx; the very adequate explanation it affords both of the extraordinary and spasmodic muscular actions which accompany the cough, and of its occurrence in paroxysms after intervals of uncertain duration; and lastly, the key which it furnishes to the chaotic host of apparently opposite remedies that have obtained professional or popular reputation in its treatment.

"Of these remedies, we find one group adapted to lessen the original bronchial affection, and favour the expulsion of the offending mucus—as emetics, antimonials, and counter-irritants applied over the chest; another, which acts by altering the quality of the secretion, as the alkaline carbonates, ammonia, and the sulphuret of potass, so strongly recommended by Dr. Blaud himself; another, by exciting a new action in the bronchial membrane; and constringing the vessels, put a stop to the secretion in a manner perfectly familiar to the physician in chronic bronchitis, and to the surgeon in purulent ophthalmia—the superacetate of lead, alum, common resin, T. cantharides in Bals. Copaiæ, tar vapour, and even the inhalation of nitrous vapour, &c. Others, again, as musk, both native and artificial, camphor, arsenic, conium, belladonna, opium, and hydrocyanic acid, are more especially adapted for the nervous lesions; and antiphlogistic measures meet the inflammatory lesions of the third or complicated stage."

These views were opposed by Dr. Golding Bird, Dr. Gull, Dr. Munk, and Dr. Barlow, and supported by Mr. Blenkarne, and the author of the paper. In the absence of chemical demonstration, Dr. Bird held that no reliance could be placed on the fallacious test of taste brought forward to prove the existence of a saline secretion, and supported the theory of Desruelles, which views the disease as at first inflammatory, and afterwards spasmodic, by a reference to its pathology and symptoms. He contended that alkalies are serviceable, by rendering the mucus more soluble and easy of expectoration, and not by changing its irritating quality. Dr. Munk and Dr. Barlow believed the true proximate cause of the disease to be a contagious miasm; the former considered it a true blood disease, and the paroxysm as essentially referable to spasm. Mr. Blenkarne thought the views advanced worthy of great consideration, as they afforded something like intelligible grounds for the employment of remedies.—*Lond. Med. Gaz.*, Nov., 1844.

21. *Compression of the Carotids in Cephalgia*.—This means formerly recommended by M. BLAUD, has been employed with success by Dr. DECHANG, in

several cases. Some of these are recorded by him in the *Annales de la Soc. de Med. d'Anvers*, for May last.

22. *Unusual form of Intussusception of the Colon.*—Dr. HARRISON communicated to the Surgical Society of Ireland, (Feb. 15, 1845,) the following case. The patient, when first seen by Dr. H., was much emaciated, and with a countenance expressive of great suffering and distress, such as is observed in internal malignant disease. Vomiting was so incessant that the patient could hardly speak. On examination, a tumour about the size of an orange was found near the umbilicus, between it and the ribs of the left side; it could be moved up and down, and was free from pain at times, except on pressure. Dr. H. was much in doubt about the nature of this tumour, but formed a conjecture that it was a malignant growth from the omentum between the colon and stomach. He saw that it could not be an aneurism, and its situation was too low to induce him to suppose the disease was connected with either the liver, spleen, or stomach. He would not enter into a detail of the various remedies employed, all of which completely failed to give the slightest relief. The poor man was at times very free from suffering, but at others he would scream out and say—"Kill me, or cut me open!" The only medicine that at all benefited him was opium, which he continued to take till his death. On examination of the abdomen after death, very little appearance of disease presented itself at first. There was no general inflammation of the peritoneum or of the omentum; but on raising up the latter structure, and examining the colon, an intussusception of this intestine was seen to have taken place, the descending portion of it being carried up to the transverse arch, probably for an extent of three or four inches. The transverse arch being laid open, Dr. Harrison exhibited the lower portion of intestine lying in the upper, with its orifice resembling an os uteri, projecting into a dilated vagina; this contracted appearance of the orifice might, he thought, in some degree, account for the violence of the pain that had been suffered. The intussuscepted portion of the intestine was found in an ulcerated condition, accounting for the unhealthy discharge that had existed during life. Here was a very remarkable form of intussusception totally unlike those usually seen. When Hunter, in speaking of the affection, observes that such an occurrence is possible, he talks of the two species of the disease—the one progressive, in which the invagination may go on increasing from above downwards—the other, the retrograde form, the lower portion of the tube being received into the upper, as in the case under consideration; however, he gives no example of this occurrence. Sir Everard Home mentions one case of the retrograde species in the small intestines—a point in which the present case possessed additional interest, for the intussusception was here situated in the colon, while the small intestines or the cæcum are the parts usually involved. Cruveilhier had never met with this form of the disease, and gives no plate representing the affection. Various opinions respecting the nature of the case were entertained, not one who saw it having diagnosed it, except indeed Dr. Law, who, when he first examined the patient, at once observed that he knew of nothing it resembled so strongly as intussusception. For himself, he must confess he had not for a moment formed such an opinion. No remedy is known for the disease; the boasted one of the ancients—metallic mercury—being found to be as ineffectual as the rest; purgatives given by the mouth can effect nothing; Hunter says they generally do more harm than good; he conceives that violent vomiting might reverse the peristaltic action, but he (Dr. Harrison) believed very little reliance could be placed on any aid of a mechanical nature. With the exhibition of opium and perfect quiet, it might be hoped that an adhesion would take place between the opposed serous surfaces of the intestine and the internal cylinder, by this means gradually discharged by the anus; for many cases have been observed in which so many as two or three feet of intestine had come away. The present case, in which no hope of a favourable issue could be at all calculated on, might (had a diagnosis of its true nature been made) have been a good one for the lumbar operation. Had an opening been made in the right lumbar colon, a little above the cæcum, it might reasonably be expected that he would have survived. With regard to the operation of opening the colon in the lumbar region, it appeared to him, judging anatomically, that the right ought to be chosen in prefer-

ence to the left portion of it, which latter was the one hitherto selected. The right division would be found to be least covered by peritoneum, and to have much less mesocolon, and on making examinations of both portions he had found the right colon generally deficient of peritoneum on its posterior aspect. He thought this case would be interesting to the society for many reasons—the length of time the patient had endured it, upwards of two months, it being an instance of the retrograde species, the impossibility of diagnosing it, and its relation to the very interesting subject lately under discussion.—*Dub. Med. Press*, March 5, 1845.

23. Observations on the Mechanism and Diagnostic value of the Friction Vibrations perceived by the Ear and by the Touch in Peritonitis.—The London and Edinburgh Monthly Journal for May last, contains an interesting paper on this subject by Dr. ROBT. SPITTAL. The author conceives that the following conclusions may be drawn from the observations thus far made:

That the mechanism by which the friction vibrations are produced is of three kinds, viz.

1. The respiratory movements,—of the diaphragm chiefly,—but also the action of the abdominal muscles. The vibrations being synchronous with these movements, though sometimes only developed during inspiration.

2. Artificial movement of the parts by pressure with the hand or otherwise. The vibrations corresponding in their rhythm to the movement produced.

3. The peristaltic motion of the intestinal canal,—imparting to the vibrations a peculiar, continued rustling, and creeping character to the ear and hand, corresponding to the vermicular motion of the intestines.

That the immediate cause of the friction vibrations is the rubbing together of two peritoneal surfaces, physically altered by the inflammatory process; and although the effusion of lymph has been considered necessary for their production, it appears highly probable that at a prior stage of the inflammation, when the peritoneum is merely drier than usual, friction vibrations may take place.

That the more the surfaces are moistened, the less intense will be the friction vibrations; and when a liquid effusion is sufficient to separate the surfaces, the vibrations will cease altogether at the part; but by altering the position of the patient, so as to enable the liquid to gravitate to some other part, and thus bring the surfaces together again, the friction vibrations will be renewed.

That the amount of motion between the inflamed surfaces, necessary for the production of the friction vibration, is very limited; and that different modes of friction, as to rapidity and degrees of pressure, may not only modify the intensity, but also the tone and quality of the vibrations.

That the present state of our knowledge does not permit us to connect any particular species of vibration with a certain physical condition of the peritoneum, although reasonable grounds exist for this expectation.

That although the friction vibrations are no evidence of the existence of adhesions between the peritoneal surfaces, it has not been proved, that in the case of partial adhesions,—and even when the adhesions are general, provided the effused lymph be recent, soft, and extensible,—an amount of motion sufficient to produce the friction vibrations might not occur.

That the respiratory abdominal friction vibrations are chiefly manifested at the upper part of the abdominal cavity, where its more solid contents are situated, and in the case of a large organic tumour,—and may be regarded as indicative of the inflammation existing over a solid organ or tumour.

That the indications from artificial movement of the parts have been perceived, both where tumours were present, and where the intestines alone, or along with the omentum, were the site of the inflammation.

That the peristaltic friction vibrations indicate that the peritoneum investing the corresponding portion of the intestinal tube is the part affected.

That wherever the peristaltic vibrations are *very distinctly perceived*, they may be regarded as indicative of a lively and free motion of the folds of intestine upon one another, and upon the parietes; and of few or no adhesions existing between them. At all events, it shows that the intestines are not generally adherent, nor matted together into an adherent mass, nor, to any great extent, adherent to the abdominal parietes.

That in cases of peritoneal inflammation in the upper portions of the abdomen, simulating pleuritis, the presence of *any degree* of the peristaltic friction vibration might very much assist us in the diagnosis.

24. *Sanguineous Apoplexy in a child eleven days old.*—A case of cerebral hemorrhage, a rare occurrence in very early life, is recorded by Dr. A. D. CAMPBELL in the *Northern Journal of Medicine* for Jan. last. The infant was a stout healthy male, and until the morning of the day on which he died, had shown no symptoms of disease. About seven A. M. he vomited frequently, and in an hour and a half afterwards was suddenly seized with violent convulsions, tossing about the head and limbs, rolling the eyes, and accompanying these movements with loud shrieks; in this state he was found by the gentleman who was requested to visit him. The pulse was at this time extremely rapid and hard, the pupils were contracted, the head hot; but the body and legs, especially the latter, felt cold to the touch, and attempts to vomit were occasionally made. The child was immediately placed in a warm bath, cloths dipped in cold water were applied to the head, and a powder composed of calomel and scammony exhibited. When the infant was removed from the bath, leeches were directed to be applied, and the other treatment usually employed in such cases was judiciously and energetically resorted to. In two hours thereafter a second powder similar to the first was given, as the bowels remained unmoved, and the symptoms continued unabated. At noon the child was again seen; it then appeared to suffer under all the symptoms of compression of the brain, precisely similar to those generally observed in the last stage of acute hydrocephalus; the convulsive movements of the limbs had subsided, it emitted occasionally a low moan, the pupils of both eyes were widely dilated, and the pulse was frequent, small, and feeble. A blister was now applied to the head, and two grains of calomel with five of jalap ordered to be given every second hour until the bowels were moved. In spite of the treatment, however, the child never showed the slightest signs of amendment, and died between six and seven the same evening, after an illness of rather less than twelve hours' duration. On examination of the body after death, its external appearance presented nothing unusual. On opening the cranium, and reflecting the dura mater from the circumference of each hemisphere towards the mesial line, I found the superficial vessels of the organ distended with blood; and on the surface of the middle lobe of the right hemisphere a small ecchymosed spot, of about three-eighths of an inch in diameter, situated under the arachnoid, which was quite transparent, and not clouded by any lymph effusion. On making a vertical section through this spot, I saw that it was the apex of a clot, nearly of the size and shape of half a small walnut shell, with the concavity directed upward. The blood was of the consistence and colour of thin currant jelly. The substance of the brain in contact with the clot was of an ochre colour, much softened, reduced in fact to pulp, to the depth of about an eighth of an inch all round. This pulp was examined with the microscope, and consisted of the tissue of the brain, numerous blood-globules, and fluid, but contained none of the corpuscles characteristic of inflammatory softening. The other parts of the brain when cut into were less firm than usual, especially in the affected hemisphere, which seemed as if infiltrated with colourless serum. The quantity of fluid in the ventricles was not greater than natural, and the brain exhibited no other abnormal appearance. The examination of the other cavities of the body was not permitted. On account of the unusual occurrence of the affection in so young a subject, the scalp, bones of the cranium, and external surface of the body, were again carefully inspected, but no mark of violence was discernible thereon.

From the microscopic examination of the softened tissue surrounding the clot, Dr. C. is inclined to regard its pulpy condition neither as resulting from previous inflammation, nor as arising from the irritation produced by the clot as a foreign body, but as caused by the effused blood having forced its way into and broken up the tissue immediately adjacent to the extravasation.

25. *Treatment of Chronic Eczema.*—Mr. B. PHILLIPS states, in the *Lond. Med. Gaz.*, March 1845, that he has treated with signal success many cases of chronic eczema, by the following simple plan:

He purges the patient with calomel gr. v, jalap gr. xv, and two days afterwards repeats the purgative. He has the affected part bandaged, and the bandages wet with warm water, and covered with oil silk, so as to constitute a constant tepid bath. He also gives the liquor arsenicalis *minim* v. twice a-day.

26. *Ossified Gall-Bladder*.—Dr. S. S. ALISON relates, in the *London Med. Gaz.*, Nov., 1844, an example of this, which he found in a female who had died of acute bronchitis of the left side. The patient had been singularly healthy throughout life, had never suffered any symptom of bilious diseases and was of temperate habits. With the exception of the gall-bladder, the contents of the pelvis and abdomen presented their natural characters. The gall bladder was white or grayish, resembling fresh putty, hard and resisting to the touch. It was distended with fluid bile: the cystic duct was obstructed with solid cholesterine. The outer coat of the gall bladder was greatly thickened, and contained much phosphate of lime. The gall bladder was very firmly attached to the liver. No signs of inflammation, either old or recent, were discovered in the bladder itself, or in the surrounding structures.

27. *Report of the Committee of Vaccination, made to the Academy of Sciences of France, Feb. 25th, 1845*.—In 1840 the Academy of Sciences proposed the following questions as a subject for a prize essay:—

1. Is the preservative power of vaccination absolute or merely temporary? If it is temporary only, determine by accurate experiments and authentic facts, what is the period for which the vaccine matter exerts its protective influence against small-pox?
 2. Has vaccine matter taken directly from the cow, a more certain and durable protecting power than vaccine matter transmitted a greater or lesser number of times through the human subject?
 3. If the protective power of vaccine matter becomes enfeebled, should it be renewed, and if so, how?
 4. Is it necessary to vaccinate the same individual several times, and if so, after how many years should the vaccination be repeated?
- The part of the report now read relates to the two first questions only.

The protecting power of vaccination being definitely established, the question arises—Is it possible, after forty-five years' experience, to determine the limits of that power? The answer to this question is difficult in the extreme, as it embraces inquiries not in France alone, but throughout the whole world: in fact, a general investigation of every case in which vaccination had been performed could alone supply the fundamental elements of the problem to be answered. The commission consequently announced in their report of 1840 that they did not expect the memoirs of the competitors for the prize to contain a general and definite answer, but a partial solution, only preparatory to that which time may perhaps ultimately afford.

The competitors for the prize have particularly examined how vaccinated persons are circumstanced during the prevalence of epidemic small-pox; in other words, what is the proportion of vaccinated persons in the entire number of those attacked with small-pox. The protective power of vaccination is by this mode of investigation reduced to a numerical question. An attentive examination of what occurred during thirty epidemics of small-pox in France shows two important facts—First, that somewhat more than one-third of the entire number of persons attacked with the small-pox had been vaccinated; secondly, that the mortality among the vaccinated persons was very small. According to the author of one of the memoirs, more than one-third of those attacked in the epidemics which occurred at Montbeillard had been vaccinated, but there was no corresponding increase in the amount of mortality amongst the vaccinated patients; and the same result was observed in the epidemic of 1828 at Marseilles. The same results follow from an examination of the epidemics that have occurred in England, Sweden, Denmark, Italy, Malta, Geneva, &c.

The fact, then, being established, that vaccinated persons can become affected with small-pox, and the proportion so attacked during epidemics being nearly determined, a most important problem remained to be solved—viz., what was the condition of the vaccinated persons affected as regarded the mere fact of their vaccination? The authors of all the memoirs agree in stating that vaccinated

persons were not affected indiscriminately, or by chance, as it were ; on the contrary, the small-pox seems to make a kind of selection from amongst them. With some exceptions, the small-pox attacks those who have been vaccinated since a long period, and spares those who are recently so. An examination of the tables published in various parts of Europe, proves positively that children are seldom attacked with small-pox before the ninth year of vaccination, and also proves the converse fact, that it attacks in preference persons who had been vaccinated ten, fifteen, twenty, thirty, or even thirty-five years previously.

A general fact, which might be anticipated from the history of eruptive complaints is, that after the age of thirty-five years, the aptitude of vaccinated persons to contract small-pox becomes so slight that it may be considered as having vanished. An investigation of the facts relative to the occurrence of small-pox in vaccinated persons lead to the three following conclusions :—

1st. The protective power of vaccination is absolute and general for the first five or six years, and even to the eleventh or twelfth year, to judge from the experiments on re-vaccination.

2d. After the foregoing period, a part, but a part only, of those vaccinated, again become liable, especially under the influence of an epidemic, to contract small-pox.

3d. The greater number of those vaccinated probably remain completely protected from small-pox during their entire life.

Has the cow-pox, taken directly from the cow, a more certain and permanent protective power, than vaccine matter that has been transmitted more or less frequently through the human system ? The experiments contained in several of the memoirs confirm the observations made by the Committee of Vaccination at Paris. The greater intensity of new vaccine matter, as compared with that long in use, is a fact definitely established by experience in England, Germany, Italy, and France. But is this greater intensity coupled with a greater preservative power ? or, as the report puts the question—Is there any relation between the lesser or greater intensity of the local phenomena and the protective power of the variolous matter ? The experiments made on this point show that the protective power of vaccine matter is not proportional to the intensity of the local symptoms, but that vaccination, with matter taken from the cow, is more certain than old vaccine matter. Admitting that the protective power of vaccine matter diminishes with time, should it be renewed, and if so, how ? Has the greater or lesser intensity of the local phenomena of vaccination any relation to its preservative power ? The diminution of power, according to the report, is undoubted.

As to the means of renewal, the first mode employed was the transmission of vaccine matter from man to the cow—an experiment frequently performed as a matter of curiosity, but only recently sought to be rendered a means of restoring to the vaccine matter its pristine lost energy. The authors of several of the memoirs maintain that the cow, when thus vaccinated, restores the vaccine matter unaltered, and therefore unregenerated, but the commission of the Academy think this conclusion too absolute : in fact, it has been established by the experiments of the author of one of the memoirs, that vaccine matter taken from man is regenerated during its transmission through the cow. The same fact results from thousands of experiments made in Bavaria under the direction of government. Vaccine matter thus regenerated, failed in less than 1 case per 100, while the failures of the old vaccine matter were nearly 3 per cent. Would it not be better to transmit the vaccine matter through several cows in succession than through one only ? The mode, however, which should be preferred to all others—the only one on which we can entirely rely—is, as recommended by Jenner, to obtain vaccine matter from its original source. Several circumstances seem to show that the cow-pox is perhaps of less frequent occurrence than is commonly thought, and the commissioners suggest that those who happen to meet with it, should not content themselves, as has been hitherto done, with transmitting it to man, but should transmit it to other cows, and thus regenerate the infection.

Is it necessary to vaccinate the same person several times ? and if so, after the lapse of how many years should the re-vaccination be performed ? On this head the report first refers to the fact that the re-vaccinations, performed for a considerable period after the discovery of vaccination, did not succeed, except in some rare

cases, because they were performed too soon after the primary vaccination. But when at a later period experience showed that the protective power of vaccination diminished with time, the practice of re-vaccination was resumed, and then succeeded beyond expectation. In some parts of Germany, especially, re-vaccination was practised universally in the army, and even in civil life. Physicians also who had had small-pox in some instances re-vaccinated themselves, with success, of which Dr. Heim is a remarkable example. He attended on his brother for three weeks while he laboured under confluent small-pox, and three weeks after having gone through this decisive trial, he vaccinated himself, and had pustules almost of the ordinary size. M. Moreau, the celebrated accoucheur, who had small-pox in early life, re-vaccinated himself three times with success.

A document published by the government of Wurtemberg, which showed that of 1677 persons affected between 1831 and 1836 with small-pox, 1055 had been vaccinated, contributed greatly to extend the practice of re-vaccination in Germany and in the north of Europe. In France, the statistics of epidemic small-pox show that the number of vaccinated persons attacked with small-pox constitute more than a third of the whole number of patients affected. It is impossible, therefore, to doubt the propriety of practising re-vaccination. It is during epidemic small-pox, especially, that the utility of re-vaccination becomes obvious. Not only have individuals been thus protected, but the spread of the epidemic has been arrested.

In Prussia re-vaccination has been practised in the army since 1833, and the small-pox has been almost entirely extirpated. In Wurtemberg but one case of variola occurred in five years among 14,384 re-vaccinated soldiers, and 3 only among 29,864 re-vaccinated civilians. Epidemic small-pox has not appeared in France since 1830, the period when re-vaccination was commenced. The authors of the memoirs agree that during epidemics it is prudent to revaccinate about the eighth or ninth year. The answers given by the competitors for the prize to the questions proposed by the Academy, may be thus summed up:—

1st. The preservative power of vaccination is absolute for the majority, and temporary for a small number; and even in the latter it is absolute until adolescence.

2d. Small-pox rarely attacks those who have been vaccinated before the age of ten or twelve, from which age, until thirty or thirty-five, they are particularly liable to small-pox.

3d. In addition to its protective power, vaccination so modifies the animal economy that it attenuates the symptoms of small-pox, abridges its duration, and considerably diminishes its danger.

4th. Vaccine matter taken directly from the cow causes local symptoms of greater intensity; its effects are also more certain than those of old vaccine matter, but after being transmitted for a few weeks through the human subject, the local intensity disappears.

5th. The preservative power of vaccine matter does not seem to be intimately connected with the intensity of the symptoms of vaccination, nevertheless it is prudent to regenerate vaccine matter as frequently as possible, to preserve its protective power.

6th. The only mode of regenerating vaccine matter deserving of confidence is to procure it from the cow.

7th. Re-vaccination is the only known method of distinguishing those vaccinated persons that remain protected from those that do not.

8th. The success of re-vaccination is not a certain proof that the person in whom it succeeds was liable to contract small-pox; it merely establishes a tolerably strong presumption that they were more or less liable to be so.

9th. In ordinary periods re-vaccination should be practised after fourteen years, but sooner during an epidemic.—*Dub. Med. Press*, April 23, 1845.

28. *Alum in Pertussis*. By GOLDING BIRD, M.D. (*Guy's Hospital Reports*, April, 1845.)—Alum has enjoyed some repute as a specific in hooping cough. Dr. Bird who has prescribed this drug extensively during the last three years, states that in one stage of hooping-cough he had found it a most valuable remedy; but that like all reputed specifics, its administration will end in disappointing the hopes

of the prescriber, unless discrimination is used in selecting the proper stage for its exhibition.

In the second or nervous stage of the disease—after all the inflammatory symptoms have subsided; and when, with a tolerably cool skin and clean tongue, the little patient is left severely distressed by the more or less copious secretion of viscid mucus from the bronchi, each attempt to get rid of which, produces the exhausting and characteristic cough; the alum, he says, will be found of great value. He has not yet met with any other remedy which has acted so satisfactorily, or given such marked and often rapid relief to the child. He generally gives it in doses of from two to six grains in children from one to ten years of age, repeated every four or six hours. For a child of two or three years, Dr. B. employs generally the following formula:—R. Aluminis gr. xxv; extr. conii gr. xij; syrup. rhædos 3ij; aq. anethi 3ij; M. Capiat coch., 1 med., 6tā quaque horâ.

Dr. B. has never met with any inconvenient astringent effects on the bowels during the exhibition of this remedy; on the contrary, in more than one instance it produced, he says, diarrhœa. The only obvious effects resulting from its use were, diminished secretion of a less viscid mucus, with a marked diminution in the frequency and severity of the spasmodic paroxysms.

Dr. Bird has also administered alum in the bronchorrhœa of patients affected with emphysematous lungs, and, in severe cases, with marked advantage.

29. *Crystallized Nitrate of Silver in Diarrhœa of Children.* By Dr. HENOCHE.—According to Rousseau's proposal, nitrate of silver was employed in the polyclinic of Berlin, by Romberg, in cases of obstinate diarrhœa of children. The usual formula was: R. argent. nitr. crystal. gr. $\frac{1}{2}$ -j; solve in aq. destill. q. s. mucilag. rad. salep. unc. $2\frac{1}{2}$, syr. diacod. unc. $\frac{1}{2}$. A teaspoonful to be taken four times a day. The author details twelve cases of acute and chronic diarrhœa in children from nine months to twelve years of age, which were treated generally with complete success; and without any subsequent injurious consequences. Even when the symptoms indicated the presence of tuberculosis intestinalis, the nitrate of silver displayed an equally good effect. The remedy does not seem to have been used at all in the form of enema.—*Med. Times*, May 24, 1845, from *Journal fur Kinderkrankheiten*.

SURGERY.

30. *Irrigations with Cold Water in the treatment of severe Traumatic Lesions.*—Dr. ROGNETTA, in his very valuable *Annales de Therapeutique Medicale et Chirurgicale et de Toxicologie*, presents a monthly sketch of the most interesting cases observed in the hospitals of Paris, and the modes of practice there adopted with a view of exhibiting the existing state of surgery in that capital. We shall frequently enrich our journal from these sketches.

In the number of his Annals for October last, Dr. Rognetta informs us that irrigations with cold water in the treatment of severe traumatic injuries are at present in high favour in the Hospitals of Paris. Four patients in the Hospital Beaujon are at this moment treated in this manner, with the greatest advantage. One is a mechanic 50 years of age, who had his right hand crushed, ground to pieces, as it were, by the wheel of a carriage; the soft parts of the last four fingers were horribly mangled, gangrenous in several points, the sheaths of the tendons largely opened, the nails torn off; some of the phalanges exposed. It was precisely one of those cases for which lately amputation would have been directed of the forearm, a practice which many surgeons still follow, and they make great boast of employing, as their only dressing, poultices, with a few leeches. But fortunately, in consequence of the continual irrigation with cold water which the surgeon has employed day and night, over the whole hand, the inflammatory reaction has been moderated and limited; it has not spread farther than the fingers, the sloughs have separated, several of the tendons are in process of exfoliation, a healthy granulating surface is established, and nature labours admirably at reparation under this constant deluge of cold water. To day, the 12th from the

accident, the patient already moves his fingers, the wrist and the forearm are neither swollen nor stiff, nor painful, and every thing promises a speedy cure, with more or less stiffness in the four fingers, the thumb not having been injured. Another patient, a man 40 years old, had his right foot drawn under a locomotive, the bones and soft parts were reduced almost to a jelly; they thought, at first, only of cutting off the leg near the ankle; however, as the first row of tarsal bones, and the corresponding part of the skin were uninjured, M. Robert performed Chopart's amputation, using for the flaps all those portions of the soft parts which were uninjured. The superior flap was large enough, but the inferior met it only imperfectly. Two simple bandages held the parts loosely together, and by the aid of cold water, the dangers attending reaction were happily surmounted; a healthy granulating surface was formed, and in spite of some small sloughs appearing on the top of the flaps, this patient is doing perfectly well, and his cure is confidently expected; to day is about the 8th since the operation. Doubtless similar results are obtained frequently without the employment of the plan of which we are now treating, but it should be noted that patients experience exceeding relief from the cold water; they forget their pain, can sleep, have scarcely any fever, or those gastric disturbances which prevent them from taking nourishment, so conducive to a prompt recovery. Wounds, indeed, are cured with great rapidity under the influence of irrigations; from the fact, too, that inflammation is either prevented or subdued by cold, those purulent deposits, (*fusées purulentes*), which are the despair of the art, and which compromise the result of the most brilliant operations, are not met with. The third patient is a man who fell upon the soles of the feet from a height of several yards. A fracture of the *os calcis* was the consequence, with enormous swelling of the whole foot and of the lower part of the leg, phlyctenæ and threatening gangrene. By the use of cold irrigations these accidents were successfully combated, the inflammatory process was subdued, and to-day, the 8th of the accident, the patient is doing well; the remedy is kept up constantly, and if it is suspended for a very short time the patient suffers very much. The same phenomena occurred in a fourth patient, who, in falling, dislocated the phalanx of the thumb backwards, opening the joint on the palmar side. It was easily reduced, and precautions were taken by means of irrigations, against the severe consequences which were justly apprehended. Two other patients are now undergoing the same treatment in the three wards of the Hotel-Dieu, confided for the time, to M. Denonvilliers. One is a young woman, who, in consequence of a fall, fractured the body of the lower jaw, broke the neck of the femur, and crushed the left foot, opening at the same time the tibio-tarsal joint; irrigations were employed upon the latter part, the most serious injury, certainly, which the woman sustained, and reaction was kept within proper bounds: the other patient is a man who had two of his fingers torn off; he is getting well. We have mentioned elsewhere a case of fracture of the elbow, with a wound of the joint and removal of splinters of bone, happily treated in the same manner by M. Gerdy; and another of resection of the radius treated with equal success by M. Blandin.

At the Hotel-Dieu, irrigation is effected by means of a bucket with a spigot, suspended over the top of the bed; strips of linen attached to the spigot conduct the water in several streams without any shock directly upon the wound. At Beaujon, an ordinary bucket is used, with a syphon made of a gum-elastic tube, which dips into the bucket and furnishes a regular stream of water, the stream being regulated by means of a cock in the tube itself. In both these hospitals warm or slightly tepid water is generally preferred to cold. However, the water which we saw used at Beaujon was cold, and we congratulate the surgeon thereon for as soon as the water becomes warm the true end of irrigation is more or less lost. Irrigation, in fact, acts only as a physical agent, in removing by its low temperature one of the most essential elements of inflammation—morbid heat. A vital, refrigerant, antiphlogistic action, results from it indirectly. But, if the liquid is warmed, it is evident that the morbid stimulus is but slightly lessened, and although some little good effect may be produced by the washing away of the pus and by diminishing the excess of caloric, the benefit is much less decided. M. Denonvilliers and some other surgeons think that irrigations with cold water may give rise to tetanus or gangrene; this appears to us to be a mere prejudice;

it is easy to prove that the examples adduced to sustain it are not conclusive, these accidents being entirely independent of the use of cold water. It is very much to be desired that hospital surgeons should understand better the immense advantage which the art may derive from this powerful remedial application, and that the preconceived ideas which have hitherto excluded it from several of the clinics should give place to a more perfect knowledge of its action. According to the observations of M. Robert, cold irrigations are not found to be of real utility, excepting in the severe injuries of the smaller limbs, as the hand and foot. In the forearm the advantage will be still less, and in the thigh least of all. In the last mentioned part, as M. Marjolin has observed, the water renders the skin cold and pale, but in the deeper seated tissues the inflammatory process still goes on, which seems to show that the water has a mere superficial action. We refer the reader to the 1st vol. of the *Annales de Therapeutique*, p. 76, where this question is freely discussed.

31. Dressing of recent and old Wounds.—This subject, Dr. ROGNETTA says, (*Annales de Therapeutique*, Oct., 1844,) has lately drawn some interesting observations from M. CHASSAIGNAC. This surgeon, who, at this time performs the duties of M. Gerdy at La Charité, has applied himself to generalizing the old custom of dressing wounds but seldom, but with an important modification which it behooves us to make known. The occasional dressings were nothing more than the common dressings, applied upon charpie and other pieces of linen, and changed seldom; the pus in contact with the wound was regarded as an emollient application, (which is an error,) and the dressing, whenever it was renewed, was found to be filthy, putrefied, and sometimes full of worms. M. Chassaignac has had two objects in view in his mode of dressing, which he calls *pansement par occlusion*; to insure the escape of all the pus as fast as it is secreted, and to preserve the surface of the wound from contact with the air, and from all other sources of irritation. For this purpose he surrounds and covers the wound completely with bandages covered with ointment, which he crosses in every direction, so as to form a kind of coat of mail; these bandages which compress the wound somewhat by forcing its circumference nearer to the centre, allow the pus to escape freely through their interstices, between their edges or even through their substance, for the ointments with which they are covered melt and leave nothing but a porous tissue. Upon these bandages "*d'occlusion*" are placed some coarse charpie, compresses and an ordinary bandage. Every day the linen and the charpie are changed, and the external surface of the bandages is carefully wiped. The bandages themselves are changed, and the wound is carefully washed every four, five, six days, more or less. This, it will be seen, is not really the occasional dressing, for the wound is dressed every day, always, however, shielded by the plaster, which renders it, so to speak, a subcutaneous wound. Under this kind of dressing, wounds acquire a healthy aspect; they granulate, assume a red colour, and proceed rapidly towards cicatrization. When the dressing is changed, all the edge is found blackened and soiled by the solution of the unctuous matter, and by the generation of a sulphate of lead, the action of which may possibly contribute to the subsidence of the inflammation, and consequently to the process of cicatrization; the beautiful appearance of the wound is not entirely perceptible until it has been well cleansed. At the Hotel-Dieu, M. Denonvilliers employs this dressing in some cases, and is very well satisfied with it. We may remark that Baynton's method of dressing ulcers agrees entirely with the plan advocated by M. Chassaignac; but the method is of very general applicability, for this surgeon employs it indiscriminately in all suppurating wounds, in lacerations, in contused wounds, and obtains more success than from the ordinary dressings, the cures being more prompt, etc. M. Chassaignac thinks that the daily dressing of wounds with lint acts upon them very much like an issue pea, which is the very opposite to the opinion entertained by the ancients, who recommended the application of dry charpie when they wished to promote vigorous granulation.

However this may be, we can aver from our own experience, that the dressing by occlusion is an excellent one. Ten patients are now treated in this way at La Charité. When the wound exists with separation of parts M. Chassaignac is in the habit of making in all the parts separated a number of punctures; this conduces

much to the cure. We may remark that the dressing employed by M. Velpeau in abscesses of the breast, with or without separation of parts, with or without fistulæ, may be classed under the same principle; he covers the breast with long strips of bandage which he crosses obliquely over the thorax, from the axilla or the shoulder, arranging them artistically in such a manner as seems indicated by the suppurating sinus, and in such a way as to favour the escape of the pus and the obliteration of the abscesses; sometimes this armour-like envelop has an aperture in it opposite to the discharging orifice, sometimes it is entire. The object which the surgeon has in view in these cases is compression, and it is plain that this is better effected in this manner than by the compresses and bandages recommended by Boyer. If both breasts are affected, two distinct dressings are used; a woman, who is now in the wards, is in just such a condition; one breast is compressed for an abscess already opened, and the other for a small phlegmon which threatens to form. In this last instance, compression is employed, we see, as an antiphlogistic agent.

32. *Traumatic Tetanus successfully treated by amputation of the injured part, the application of cold to the spine and the internal use of Cannabis Indica.*—Prof. MILLER, of Edinburgh, relates in the *London and Edinburgh Monthly Journ. Med. Sci.*, Jan., 1845, a very interesting case of this character. The subject of it was a girl seven years of age, in whom tetanus supervened to a wound of the middle finger of the right hand, caused by the wheel of a cart passing over it. The disease first manifested itself thirty days after the accident. The finger never having promised well for a satisfactory recovery, Mr. M. determined on its immediate sacrifice, as soon as tetanic symptoms were fully declared, being well aware, that although in it resided the exciting cause of the formidable train of symptoms fast setting in, yet that removal of this could be expected to prove beneficial, only at a very early period of the case, ere the spinal cord had been all but irretrievably involved. Amputation was accordingly performed, with as little delay as possible, at the metatarsodigital articulation. Little pain was complained of; and blood flowed but sparingly. He abstained from deligation of any vessels; partly, because a moderate loss of blood might not be without its use, at this the commencement of the treatment; but chiefly, because he was anxious, by avoidance of the use of ligature, to leave the wound in as favourable a state as possible,—free from all source of further irritation. For a like reason, no stitches were employed; sufficient approximation being effected by tying the adjoining fingers together by a slip of bandage. Water dressing was applied to the wound; an enema, containing assafetida and turpentine ordered; cold applied to the spine and the cannabis indica in doses of 20 drops every two hours; (the dose of this last subsequently was largely increased. Under this treatment the trismus, opisthotonus, and rigidity of the upper extremities, as well as of the abdominal muscles, at first very great, and which underwent cruel exacerbations on the slightest exciting cause, gradually gave way. Rigidity gradually relaxed; the exacerbations became less painful, less frequent, and less easily induced, and, finally, recovery took place.

1st. Prof. Miller conceives that there could be no doubt of the propriety of amputating the offending part in this case, as soon as the tetanic symptoms fairly manifested themselves. The comparative absence of pain and bleeding, during the incisions, was characteristic of the disease.

The nerves of the removed finger were examined by Mr. John GoodSir, and found imbedded in dense inflammatory exudation—themselves expanded in bulk, and presenting the appearance of considerably increased vascularity.

Were a similar case of injury to present itself, with like tendency to spasmodic flexion of the parts implicated, Prof. M. would be inclined to regard that symptom as ominously premonitory, and would feel called upon, by early amputation, to sacrifice the part, even though it might otherwise afford good prospect of its own recovery.

2d. The first prescription was a full dose of calomel and jalap, while the power of swallowing was yet comparatively free. It answered well, bringing away much fetid and dark-coloured matter from the bowels, as usually happens in such cases. Sufficient action was afterwards maintained by enemata, containing turpentine and tincture of assafetida.

During convalescence, a marked perversion of the intestinal secretions persisted, and was got rid of only by a corresponding continuance in the use of alterative aperients.

3d. Since the perusal of a case of hydrophobia, treated by Dr. Todd, of King's College, London, and published in the *Lancet*, No. 960, p. 583, Prof. M. has felt very hopeful of ice applied to the spine, as a remedial agent, not only in that disease, but more especially in tetanus. And he determined to make trial of it on the first opportunity. Its action is obviously sedative on the nervous system; powerfully and directly so. So soon as circumstances permitted, it was had recourse to in this case, and was maintained in constant, or almost constant operation for ten days; the bags of ice being laid along the whole spine, but with the chief effect directed on the upper part. Forewarned by the circumstances of Dr. Todd's case, he was prepared to use this remedy with much caution, aware that the sedative power might prove excessive, and might demand not only considerable intermission of the application, but a cotemporaneous use of general support, and perhaps of stimuli. He was surprised to find, however, that no occasion for either presented itself. The pulse kept low, certainly, and of but sparing strength, but not too much so. And the only complaint made of the application, by the patient, was the attributing to it the severe pain felt in the back, which was caused doubtless by the opisthotonus. When the symptoms had plainly begun to yield, the ice was discontinued; particularly as, about that time, tendency to free perspiration began to manifest itself.

Very shortly after discontinuance of the cold, two marked exacerbations occurred—at a time when these had greatly abated; but as there was no recurrence, he did not think it necessary to resume the application.

4th. The cannabis was begun in a very moderate dose, which was gradually increased, until about three grains of the resinous extract were taken every half-hour—a full dose for an adult, in ordinary circumstances, without repetition. A few doses usually induced sleep, with marked mitigation of the spasm; and on the patient's emerging from the state of narcotism, the remedy was resumed, and steadily continued until a similar result was obtained. The period of narcotism, and consequent intermission of the medicine, did not usually exceed two or three hours. The sleep was deep and unbroken, and seemed to be refreshing. It certainly was followed by no headache, or other apparent inconvenience. The eyelids were seldom, if ever, shut, as in ordinary sleep; but remained half open, disclosing the eyes, dull and upturned, and giving to the countenance a very peculiar expression. While the exhibition of the drug was at its maximum, great irritability and peevishness of temper were shown by the patient, during her waking moments; but it were, probably, unfair to attribute this to the medicine.

As the symptoms began to recede, the cannabis was proportionally diminished in dose. Ultimately, it was discontinued altogether, while yet a hardness of the abdominal muscles remained; it seeming, then, to meet with comparatively little tolerance in the system, and to induce a quick and irritable state of the circulation. Throughout the whole period of its use, its effect on the appetite was most obvious; but greatest, as was to be expected, during convalescence. The craving for food, of all kinds, was stated to be, at times, absolutely voracious.

The following are Prof. M.'s conclusions respecting the action of the cannabis:

" 1st. It has the power—probably not slight—of controlling inordinate muscular spasm.

" 2d. In tetanus there is a marked tolerance of the remedy; both as regards the safe exhibition of large doses, in frequent repetition, and the absence of such unpleasant consequences as the usual dose, in ordinary cases, is apt to induce.

" 3d. With its antispasmodic virtue, *in appropriate cases*, it probably conjoins hypnotic and anodyne properties, though in a minor degree.

" 4th. It has the effect of remarkably increasing the appetite; and digestion does not seem to be impaired. The dejections, though dark and offensive, contained no unchanged ingesta.

" 5th. It does not induce constipation.

" 6th. On recession of the tetanic symptoms, the dose of the medicine should proportionally decrease. The tolerance is passing off, and if the original dose be continued, some of the untoward effects are not unlikely to occur."

5th. The fifth indication of cure was never lost sight of. From the first, very strong beef-tea was ordered to be always in readiness, and to be frequently administered. As the trismus yielded, and the power of swallowing was regained, ordinary food was offered in addition, and usually was taken with greediness.

33. *Fungus of the Testicle.* By JAMES SYME, Professor of Clinical Surgery, in the University, Edinburgh. (*Lond. and Edinb. Monthly Journ. Med. Sci.*, Jan., 1845.)—This disease was first described by Mr. Lawrence under the title of "A Peculiar Affection of the Testis, attended with the growth of a fungus from that organ," (*Edinb. Med. and Surg. Journ.*, 1808,) and he recommended the removal of the fungus by means of escharotics, ligature or the knife, instead of castration. This treatment was necessarily tedious and protracted.

Prof. Syme proposes a much more satisfactory mode of treatment, should further experience show it to be as successful as it has so far been in Mr. Syme's practice.

"When the fungus growth is divided longitudinally," Prof. Syme remarks. "that is, from the base towards the circumference, it may be seen to consist of two textures, distinguished by their colour and arrangement. One is brown and disposed in straight lines, radiating from the base, where they are nearly, or quite close together, towards the circumference, where they are more or less apart, according to the size of the excrescence. The other is white and granular, lying in the spaces which are afforded by the diverging rays. The former is composed of the tubuli seminiferi, altered in situation but not in structure, while the latter is simply organizable lymph that has been effused into the interstices. The relative proportion of these textures may be seen best by making successive sections of the fungus, parallel with its base. Here the substance of the testicle appears little if at all altered, and presents a mass of uniform brownish colour. But in proceeding towards the circumference, each slice shows more and more of the white interstitial substance, until it seems to be the sole constituent. In addition to these facts, which are within reach of the naked eye, Mr. John Goodcir detected in a fungus which I gave him for examination, by the microscope, that it was covered externally by a thin layer of substance possessing the characters of a granulating surface. So that the excrescence might be regarded as merely an extreme degree of exuberant granulation, or what, in vulgar language, is called 'proud flesh.'

"This observation suggested to me the idea, that by the use of proper means the fungus might be made to retrace its steps, through absorption of the white substance and gradual approximation of the brown, and that the granulating materials of the surface might thus be enabled to complete the healing process. Pressure was obviously the agent on which reliance should be chiefly placed for producing the effect desired with this view, and the most convenient mode of compressing the growth, seemed to be enclosing it within its proper covering of the scrotum. There is no loss of substance in this part, as the fungus issuing through a small ulcerated orifice, merely presses the integuments aside, so that they are found lying in loose folds above the dense ring that encircles the neck of the protruded mass. It must, therefore, be easy to obtain from this source, an abundant supply of materials for the purpose."

Prof. S. relates the two following cases, in which he successfully resorted to this mode of treatment:

CASE I.—Andrew Ayton, aged 26, was admitted on the 8th of January last, on account of sores upon his legs, and a fungous excrescence from the testicle, about the size of a filbert. On the 15th, Prof. S. cut round the fungus, and extended the incision upwards as well as downwards, so as to give it an elliptical form. The integuments were then separated on each side, and brought over the growth, where they were retained by three stitches. The scrotum was supported by plasters and a bandage. It appeared at first as if union by the first intention had taken place completely; but part of the wound suppurated, without, however, showing the slightest disposition to protrude. The patient might have been allowed to go home soon after the operation, but was retained until the wound had fairly cicatrized, and left the hospital on the 9th of February.

As the fungus in this instance was of a small size, the following case, which exhibited the disease in its most formidable aspect, will probably be considered better evidence in favour of the treatment—though, Prof. S. believes the truth to be, that the obstacle to recovery is greater when the excrescence is small, than when it has attained a larger extent—since the tendency to protrusion must be stronger in the former condition than in the latter.

CASE II.—William Smith, aged 38, was admitted on the 13th of October last, on account of a fungus of the testicle. It was attributed to the effects of a blow.

On the 15th, Prof. S. proceeded as in the former case, but of course found it necessary to make a much more extensive separation of the scrotal integuments, in order to obtain a covering for the fungus. Complete reduction having been effected, the edges of the wound were stitched together, and carefully supported by straps of adhesive plaster applied round the scrotum, which had been shaved to permit their employment. A T bandage was then put on to keep the parts more securely steady. No unpleasant symptom followed the operation, and at the end of a fortnight the cure might be nearly considered complete; and Prof. S. believes would have been so, if the thick and indurated margin of integuments surrounding the neck of the fungus had been cut away. But in the course of another week there could be no hesitation in regarding the patient as entirely well.

It was well said by an excellent surgical writer of the last century, that “a grain of matter of fact to a practical surgeon is worth a pound of reasoning,” and I accordingly hope, that the results of these cases will outweigh the various speculative objections which have been, or may be, urged against the practice now proposed.

34. *Compression in Aneurism.*—(*Dublin Medical Press*, March 19, 1845.) Compression has been employed in Great Britain, within the last three years, for the cure of aneurism, with a degree of success calculated to inspire much confidence in this mode of treatment. Dr. BELLINGHAM communicated to the Surgical Society of Ireland, March 1st last, the following list of cases successfully treated by compression, since its introduction by Dr. Hutton in Nov., 1842. The cases are arranged as nearly as possible in the order of their occurrence:—

1. Dr. Hutton, case of Popliteal aneurism.
2. Dr. Cusack - - Popliteal aneurism.
3. Dr. Bellingham, - - Popliteal aneurism.
4. Mr. Liston, - - Femoral aneurism.
5. Dr. Harrison, - - Popliteal aneurism.
6. Mr. Liston, - - Femoral aneurism.
7. Dr. Bellingham, - - Femoral aneurism.
8. Dr. Kirby, - - Popliteal aneurism.
9. Dr. Allan, - - Popliteal aneurism.
10. Mr. Greatrex, - - Popliteal aneurism.
11. Dr. Cusack, - - Popliteal aneurism.
12. Dr. Porter, - - Popliteal aneurism.

Dr. Bellingham stated that he had “intended to have made some analysis of these cases, at least so far as the length of time which each patient had been under treatment, the amount of tolerance of compression, and the part of the vessel to which the pressure had been applied with least inconvenience to the patient, &c. &c.; but as full details of all the cases have not yet been published, I shall confine my observations to some other points connected with the application of pressure, and endeavour to answer some of the objections which have been urged against this mode of treatment.

“It will be observed, in the cases which have been published, that the femoral artery could be traced after the cure to near the sac of the aneurism, proving that the artery is never obliterated at the point compressed. But as upon a former occasion I endeavoured to show that such an amount of pressure as would obliterate the artery is never necessary, and that the cure would be more quickly and more certainly brought about by allowing a feeble current to pass through the sac of the aneurism, than by completely checking the circulation in the vessel, I shall

not dwell further upon it now. I may observe, however, that this principle appears to have been established by the cases which have occurred in this country since; indeed, in Mr. Cusack's case, communicated to the society at the last meeting, palpitation was complained of when pressure was carried so far as completely to interrupt the current through the artery; this I also noticed in the last case which I treated.

" It is deserving also of remark that in the cases which have been detailed in full, an enlargement of the articular arteries about the knee, coincided almost with the cessation of pulsation in the tumour. This increase in size of the anastomosing vessels, showing that the collateral circulation is becoming established, is obviously a very favourable sign; and if it occurs early during the treatment, we may look for a speedy cure, as it indicates the filling up of the aneurismal sac.

" The principal improvement which has taken place in the mode of treating aneurism by compression, since I last brought the subject before the Surgical Society, consists in the employment of two instruments along the course of the artery leading to the aneurismal sac; when the pressure becomes painful at one point this can be relaxed, the other having been first tightened; and by thus alternating the pressure, we are enabled to keep up continued compression for any length of time. By this means the principal obstacle in the way of the employment of pressure has been removed; the patient can apply it with comparatively little inconvenience to himself; time will not be lost, owing to the parts becoming painful or excoriated, from the pressure of the pad of the instrument, as sometimes has happened from carelessness in applying the compressor; and as the pressure need not be interrupted for any length of time, but may be continued for a great part of the twenty-four hours, the duration of the treatment will be necessarily considerably abridged.

" Some of the success of the improved method of applying pressure must, however, be referred to the improvement in the instrument used. That which I employed, (made by Mr. Milliken, of Grafton street,) and now upon the table, is a modification of a carpenter's clamp, which was invented by a patient under Dr. Harrison's care for popliteal aneurism, whom I had the opportunity of seeing several times, both while under treatment and after the cure had been completed. It consists of an arc of steel, at one extremity of which is an oblong padded splint, the other extremity terminates in a nut, containing a quick screw, to which a pad similar to that of the tourniquet is attached. The principle of this instrument is exceedingly simple, so much so that the patient can apply and remove it himself, and it can be made of any size, so as to compress any vessel within the reach of compression. It appears to be a much superior instrument to that which was employed in the cases treated in the London hospitals, the application of which cannot be maintained for any length of time without occasioning severe pain.

" Compression, in several instances, has obvious advantages over the ligature, independent of this proceeding being perfectly exempt from danger.

" Thus the manner in which pressure brings about the cure of aneurism, appears to be precisely that by which nature, under the most favourable circumstances, effects a spontaneous cure. The fibrin of the blood is entangled by the lining membrane of the aneurismal sac, successive depositions occur until the sac is completely filled, the tumour becomes solid, and all pulsation ceases: the sac no longer permitting the passage of blood through it, the collateral branches become enlarged, and the circulation is carried on by them. The tumour then gradually diminishes in size, owing to the absorption of its contents, and the gradual contraction of the sac, and finally it disappears.

" Again, pressure is applicable to certain cases of aneurism to which the ligature is not, as well as to some cases in which the application of the ligature would be likely to be followed by unfavourable results. For instance, when an aneurism has attained a very large size, the long-continued pressure of the tumour must act injuriously upon the collateral circulation, compressing the veins, perhaps obliterating the arteries in its vicinity, and causing œdema of the limb below the aneurism. If a ligature under such circumstances is applied, the limb is very likely

to fall into gangrene. This cannot happen in the treatment of aneurism by compression, which acts slowly and gradually, and can be intermittent at any time.

"Again, when an aneurism has attained a large size, if its contents are principally fluid, and its parietes much thinned, inflammation and suppuration of the sac very commonly follow the application of a ligature, which may bring the patient's life into danger, and at best must render the recovery very tedious. This has never occurred yet after the use of compression, and such a result is evidently much less likely to follow it.

"Again, aneurism not unfrequently occurs in individuals in whom the coats of the artery between the tumour and the heart are so much diseased that the vessel, instead of taking on the adhesive inflammation after the application of the ligature, ulcerates—or the ligature cuts its way through—or aneurism may occur in subjects labouring under valvular or other disease of the heart. In all such cases the operation by ligature is contraindicated, and would almost necessarily fail; whereas pressure may be applied with the same prospect of success as in subjects in whom the heart and arteries are perfectly healthy. Pressure is also applicable to cases of the aneurismal diathesis, or where more than one aneurism exists at the same time—cases in which the operation by ligature is likewise contraindicated.

"Lastly, if pressure should fail in curing an aneurism, (which, from the results hitherto observed, is very unlikely,) its employment will not preclude the subsequent operation by ligature; but by retarding the increase of the aneurism, and assisting in the establishment of the collateral circulation, it would tend rather to render the chances of the operation by ligature more favourable.

"I propose now to call attention to some of the objections which have been put forward against this method of treating aneurism, and shall endeavour to reply to them.

"It has been urged as an objection to the treatment of aneurism by pressure, that the arteries are few in number to which this mode of treatment is applicable; but what is really the fact? the artery, above all others, in which aneurism is most frequent after the aorta is the popliteal, and next in frequency come the femoral and the brachial. Lisfranc has given a table of one hundred and seventy-nine cases of aneurism, exclusive of those of the aorta, collected from various works, and of this number the popliteal artery was engaged in fifty-nine instances, while the carotid was engaged seventeen times, the subclavian sixteen, and the external iliac only five times. But even this must be below the average, for few cases comparatively of operation for popliteal aneurism have been published (owing to its frequency) unless there happened to have been some peculiarity in the case; whereas most of the operations upon the iliac, subclavian and carotid arteries have been brought before the profession on account of the unfrequency of the disease in those arteries. It must be recollect ed also that aneurism of the subclavian or carotid arteries near their origin, and of the common iliac or innominata, which do not admit of the application of pressure, do not admit either of the employment of the ligature. It surely, therefore, ought not to be urged against this method that, because aneurism occurs in arteries beyond its reach, we should refuse to apply it to vessels to which it is adapted, or that the practice should be denounced because it is not applicable to every vessel.

"It has been objected to this mode of treating aneurism, that the pulsation is likely to return in consequence of the artery not being obliterated at the part to which the pressure is applied, and that the patient therefore cannot be considered safe from a relapse for a considerable period. Now, in my mind a case of aneurism, treated by pressure upon the artery above it, is much less likely to be followed by a return of the pulsation, than one treated by the ligature, and for the reasons already stated—viz., that when compression is applied in the manner which I have described, a feeble current of blood passes through the aneurismal sac for a longer or shorter period, according to circumstances, and the fibrin is gradually deposited in its interior until the sac comes to be so much filled as no longer to permit the entrance of blood. On the other hand, when a ligature is applied to an artery, as, for instance, to the femoral, for popliteal aneurism, the current of blood into the sac is at once intercepted; after a time, however, the blood finds its way into it by the collateral branches. Now, if an anastomosis of

large vessels exists between the branches of the artery above the ligature, and those between it and the aneurism, a strong current of blood will come to pass through the sac, and the pulsation will return, which cannot happen in the former case for the reasons stated. The sac of the aneurism likewise, after the application of the ligature, not being necessarily filled up by solid fibrin, but by a coagulum which may be more or less loose, pulsation is more likely to return, as the sac must contract considerably before the patient can be considered safe from a relapse; and this, from the inelastic nature of the parietes of the sac, must require sometimes a long time to be accomplished.

" It has been also urged as an objection to this mode of treating aneurism, that it is more tedious and more painful than the method by ligature. That it is less tedious, sometimes, several of the cases which have been published prove; indeed, in the case which was read at the last meeting of the society, the pulsation of the aneurism probably ceased in less than a week after the application of the two compressors; in some of the others the cure was nearly as rapid; and if in a few of the earlier instances in which this mode of treatment was adopted, a longer time elapsed before a cure was effected, it depended probably upon the imperfection of the apparatus, or upon two compressing instruments not having been employed together. With respect to the treatment by compression being more painful than the operation of placing a ligature on the vessel, including the subsequent dressings, until the ligature separates, and the wound is healed, this might have been an argument against the method, when so great a degree of pressure was supposed to be necessary as would obliterate the vessel at the part to which the instrument was applied; but the fact is, the application of the compressor (according to the rules laid down now) really relieves the pain which the aneurismal swelling occasions; after it has been applied for a certain time, it does, however, cause pain, but the patient then can relax it after having tightened the second instrument, and so continue alternately to compress different points of the vessel for any length of time.

" It has been also urged that the period which has intervened since the re-introduction of this method of treating aneurism is too short to allow us to conclude that the cures will be permanent. I do not know the exact length of time which it is considered necessary should elapse before a cure in such a case can be pronounced permanent; two of the cases of aneurism treated by compression in this city have remained well for upwards of two years, and two others for nearly the same period, and in none of the remaining cases has there been any tendency to, or appearance of, a relapse. Now, supposing for argument sake, that the aneurism should return, (which, for the reasons mentioned, is much less likely than after the operation by ligature,) the same thing has happened after the application of the ligature; and if there should be a relapse, would not pressure then be as applicable as in the first instance? and would not its employment be much more certain and safe than the application of the ligature a second time?

" The last objection to the plan of treating aneurism by compression, or rather, I should say, the last objector to this method, is Mr. Syme, of Edinburgh. His arguments against it are, however, almost confined to a few assertions, the value of which may be appreciated by the following quotation from his paper upon the subject:—' The femoral artery may be tied with so much ease, so little suffering and such perfect safety, that the laborious, distressing and tedious procedure, which has lately been brought again into notice by a surgeon of Dublin, will probably soon return to the obscurity in which it has been very properly allowed to slumber. For my own part, having tied the femoral artery *thirteen times* for aneurism, and never having met with the slightest symptom of an unpleasant nature from the operation, I shall certainly not deviate from the line of practice hitherto pursued.' Now, in answer to this piece of fanfaronnade, I shall only observe, that if Mr. Syme (after the numerous cases of the successful application of pressure which have been published, several by surgeons of far greater experience, even by his own showing, in the treatment of aneurism than himself) applies a ligature to the femoral artery in a fourteenth case of popliteal aneurism, without previously trying the effects of pressure, and it should prove a fatal one, his reflections will not be very enviable.

" I think, then, from what has preceded, we are warranted in concluding—

" 1st. That the arteries to which pressure is applicable being far more frequently the subject of spontaneous aneurism than those to which it is inapplicable, compression promises to supersede the ligature in the great majority of cases.

" 2dly. Pressure has several obvious advantages over the ligature, being applicable to a considerable number of cases in which the ligature is contraindicated or inadmissible.

" 3dly. The treatment of aneurism by compression does not involve the slightest risk, and even if it should fail, its employment not only does not preclude the subsequent operation by ligature, but renders the chances of the ligature more favourable.

" 4thly. Such an amount of pressure is never necessary as will cause inflammation and adhesion of the opposed surfaces of the vessel at the point compressed.

" 5thly. Compression should not be carried even so far as completely to intercept the circulation in the artery at the point compressed; the consolidation of the aneurism will be more certainly and more quickly brought about, and with less inconvenience to the patient, by allowing a feeble current of blood to pass through the sac of the aneurism.

" 6thly. Compression by means of two or more instruments, one of which is alternately relaxed, is much more effectual than by any single instrument.

" 7thly. Compression, according to this method, is neither very tedious nor very painful, and can be maintained in a great measure by the patient himself.

" 8thly. An aneurism cured by compression of the artery above the tumour, according to the mode laid down, is much less likely to return than when the ligature had been employed."

35. Large Erectile Tumour of the Neck cured by an injection of aromatic wine. By M. RIBERI, Professor of Clinical Surgery, at Turin.—A countrywoman, 46 years of age, strong, of a sanguine temperament, catamenia regular, subject to cerebral congestions, the mother of eight children, was received at the clinique in consequence of an erectile tumour in the right lateral region of the neck. This tumour was of the size of a turkey's egg; not painful, soft, elastic, without pulsation or discolouration of the skin; base broad and seemingly lost between the muscles and the large vessels of the region. By pressing it uniformly and gradually it disappeared entirely or distributed itself beneath the skin and muscles, and there then remained a few small isolated tumours between the muscles and particularly behind the sterno-cleido-mastoid. When the pressure was removed, the tumour gradually reappeared. The tumour had first appeared three years ago; it was small, and after 28 months, it had scarcely acquired the size of a walnut. At this period the patient confided herself to the care of a quack, who endeavoured to cure her by puncturing the tumour with a small stilet made of hard wood; this occasioned severe pain, and subsequently, violent hemorrhages, which could only be controlled by the actual cautery. From this time the tumour increased rapidly in size, and then pain was experienced in it and in the adjacent parts. These characters led to the inference that it was an erectile tumour, subcutaneous and intermuscular at the same time. The situation of the tumour precluded compression; its prolongations into the deep-seated tissues rendered vaccination, cauterization, excision, the ligature and the seton alike inapplicable. Prof. R. resolved then to inject the tumour with aromatic wine, by the aid of Awl's syringe. He circumscribed firmly the base of the tumour by a ring of paste-board in the hands of an assistant; punctured it near its centre with an ordinary needle; inserted the mouth of the syringe into the puncture, and injected the liquid. He allowed the wine to remain in the tumour a few moments, and then forced it out by moderate pressure made all around the tumour. He used the aromatic wine in this case; the reaction which follows it being slighter than that which ensues after the introduction of ordinary wine. After the injection the tumour remained hard and tense. He directed bladders of pounded ice to be constantly applied to it. The next day the tumour was painful; the adjacent parts swollen, with a general febrile reaction; two bleedings were practised, in quick succession, rigorous diet enjoined, and the ice was continued. On the third day, the volume of the tumour increased;

progressive diminution in size on the following days. On the 17th day, the whole mass had dwindled to the size of a small pea. The cure was complete.

The author, who had before successfully practised this method, closes his essay with the following corollaries: 1st, the efficacy of vinous injection in erectile tumours is indubitable; it is surprising in some instances; 2d, this efficacy is not limited exclusively to superficial or cutaneous erectile tumours, it applies equally well to the deep seated. It is applicable not only to erectile tumours of the face, but also to those seated in other parts of the body. 3d, there are cases of this latter kind which it is useless to attempt to cure excepting by the injections in question. 4th, the injection is more efficacious, if it is made with wine in which aromatic herbs, as lavender, rosemary, etc., have been boiled.—*Annales de Thérapeutique*, Oct., 1844, from *Gior. Della Sci. Med. di Torino*, Aug., 1844.

36. Hereditary brittleness of the Bones. By Dr. PAULI.—Many instances are recorded in which individuals have been affected with a sort of constitutional brittleness of the bones, and in whom fractures have happened with an unfortunate degree of facility. But we are not aware that this disposition has been observed in several members of the same family, so as to be in a manner hereditary. This has induced us to republish entirely the following article, extracted from a work of Dr. PAULI, of Landau.

"In the commune of Offenbach there resides a family, all the members of which have already had fractures. Three of them have each had two fractures; another three, either of the arm or of the leg; one has even had so many as five fractures of one or the other extremity; and to produce these injuries no considerable violence was in general requisite. The father and grandfather before them had fractures of the limbs. This family, moreover, is a very healthy one; there does not appear to be any scrofulous or other taint in operation. It is remarkable that not one of them suffered a fracture before the age of 8, so that one might suppose that this particular fragility of the osseous matter was developed only towards the age of puberty. It would seem, however, that the condition of this fragility consists in some change of the chemical constituents of the bones in their relations to each other.

"It has been very frequently observed that men addicted to the use of brandy often experience fractures, (in consequence of a degree of brittleness induced in the bones), which require a long course of treatment to insure their consolidation. I met with this great fragility of the bones, in a subject of this kind, a man 54 years of age, who hung himself 3 years ago at Goecklengen; the ribs, particularly, snapped like glass; and a very moderate force sufficed to fracture the long bones. But if fractures in these old drunkards are cured only very slowly, precisely the contrary is the case in the family above-mentioned; for in every instance which occurs in it, the fracture is very speedily consolidated, so that generally the callus is perfectly firm at the end of three weeks. I should add, too, that when the same bone has been broken a second time, it has never occurred at the seat of the callus.—*Journ. de Chirurgie*, Jan., 1845, from *Untersuchungen und Erfahrungen aus dem Gebiete der Chirurgie*.

37. Strength of Bones and the manner in which they resist External Violence.—M. CHAISAGNAC read a memoir on this subject before the French Academy of Medicine, on the 1st of April. The following are his conclusions:—

1. The various mechanisms by which external violence fractures the bones are—*a. Avulsion or elongation. b. Bending. c. Crushing. d. Torsion.*
2. When external violence tends to curve a bone, the convex fibres are elongated, and those on the concave side shortened; but between those elongated and shortened fibres there are intermediate fibres which retain their natural length so long as the curvature does not exceed certain limits.
3. The long bones having almost the figure of a three-sided prism, follow the law of solidity of that solid.
4. A triangular prism, loaded on one of its angles, resists much more powerfully than when loaded on one of its surfaces.
5. The most resisting angle of the bony prisms is that on which external causes most commonly tend to produce fracture.

6. From the configuration of the bones, it is almost impossible that the direction of the fracturing force and that of the bony fibres can ever correspond.

7. The apophyses of the extremities of the long bones being almost all continuous with one of the crests of the triangular prism, form, as it were, the base of a long pyramid attached to the central stem of the bone, which adds greatly to the strength of the bone.

8. When a force is applied in a direction parallel to the length of the limb, the principle of the decomposition of forces applies to bones, not only in their contiguity, but in their continuity.

9. The characters of the anatomical neck of a bone, considered as concurring to the decomposition of the fracturing force, are five in number—*a*. They present a contraction greater than occurs in any other part of the bone. *b*. They are placed immediately below an articular surface. *c*. They constantly occupy the extremity of the bone nearest to the trunk. *d*. They are more or less obliquely incident on the body of the bone. *e*. No muscle is inserted between the neck of a bone and the articular surface it supports.

10. The diminution of thickness in the slender parts of the long bones is compensated for by the greater compactness of the bony tissue in those situations.

11. The long bones being twisted both in the direction of their axis and of their diameter, approach the spiral form, which is an additional element, enabling them to resist vertical pressure, or an elongating force, assimilating them to spiral springs.

12. At a certain period of life the solidity of bones is at its maximum, after which period it diminishes continually.

13. The fragility of the bones in old age is in no way connected, as has been supposed, with the presence of adipose matter in their structure.

14. Three causes determine the brittleness of bones in old age—*a*. Interstitial absorption of the bony tissue. *b*. The relative predominance of phosphate of lime for a certain period of time. *c*. And after that period the partial absorption of the phosphate of lime itself, which latter cause has not been hitherto pointed out.—*Dub. Med. Press*, April, 1845.

38. *On Amputation at the Knee.* By JAMES SYME, Prof. Clin. Surg. Univ. of Edinburgh.—(*London and Edinburgh Monthly Journal of the Medical Sciences*, May, 1845.)—There are few operations in surgery, as Mr. Syme justly observes, which have excited so much discussion, or afforded room for the exercise of so much ingenuity, as amputation of the thigh. The danger immediately attending its performance, and the inconvenience of its imperfect result in rendering the stump uncomfortable, have suggested various contrivances and modifications of procedure, with the effect certainly of restraining the hemorrhage, diminishing the patient's suffering, and promoting union of the wound. But the stern evidence of hospital statistics still shows, that the average frequency of death is not less than from 50 to 70 per cent., while it cannot be denied that many of the survivors suffer from uneasiness connected with protrusion of the bone. Having from an early period of his practice devoted much attention to the subject of amputation,—having seen the circular incision give place to the flap operation,—and having witnessed the results of these methods variously modified, in the hands of many surgeons possessing every degree of operative skill, Mr. S. is at length led to the conclusion, that there is something radically wrong in the principle of the operation. This error he believes to be, dividing the thigh-bone through its shaft instead of the condyles or trochanters.

"The most frequent occasion for amputation of the thigh," says Mr. S., "is afforded by diseases of the knee-joint. Next to this may be ranked compound fractures of the leg and thigh; and then, tumours growing from the bones of the leg and thigh. Now, in regard to diseases of the knee-joint, it is well ascertained that the warrant for amputation lies in the bone, and not in the soft parts, which, however much altered through scrofulous degeneration or suppuration, readily admit of restoration to their natural condition, as is clearly shown by what happens after excision of the elbow, or amputation at the ankle-joint. In so far, therefore, as removal of the disease is concerned, it is plain that amputation through the condyles of the thigh-bone would in this case prove sufficient. As to

compound fractures of the leg, it will be admitted that if the integuments and muscles admit of the limb being removed at the middle, or lower third of the thigh, they cannot present any obstacle to a few inches more of the bone being preserved, while similar injuries of the thigh obviously require amputation at the trochanters. The same observation will apply to tumours of the bones, those of the tibia and fibula not requiring any more of the thigh-bone to be removed than may be suggested by convenience, and those of the thigh-bone itself demanding the highest practicable point of section. From this analysis it appears that taking merely the morbid condition into account, all the cases admitting of amputation at or below the middle of the thigh-bone, would admit of the operation being performed through the condyles.

"In proceeding to consider the relative advantages and disadvantages of amputating through the shaft and condyles of the thigh-bone, it may in the first place be remarked, that this, the largest member of the skeleton, contains the most extensive medullary cavity, and possesses the thickest mass of dense osseous tissue. Dense bone dies more readily than that of a spongy or cancellated structure; and the action of a saw, to say nothing of ruffling the periosteum, must always be apt to cause exfoliation, which by impeding union of the soft parts, delays union, and opposes its perfect completion, by increasing the scope afforded to contraction of the muscles. It would, however, be a narrow view to suppose that the direct effect of local injury is alone concerned in causing death of the bone after amputation; and there can be no doubt that inflammation of the medullary membrane may co-operate, if it does not sometimes act exclusively in its production. The most conclusive evidence in support of this opinion, is presented by those conical-shaped exfoliations, extending up the interior of the bone, sometimes to the length of several inches, which are occasionally extracted from stumps. One of these in my possession, taken from the humerus, is five inches long. And I believe the thigh-bone would be more fruitful of such exfoliations if amputation through it were not so fatal. But if the medullary membrane be liable to inflammation, suppuration of its texture, and inflammation of the veins cannot fail to be the frequent consequence, especially in hospitals, where, notwithstanding every precaution, certain descriptions of injuries will always be apt to excite phlebitis, and other forms of spreading inflammation. But when the bone is divided through the condyles, nothing more than the epiphysis being concerned, the medullary membrane is not at all disturbed, while the cancellated texture is not liable to exfoliate, either from its proneness to die from injury, or through inflammation of any other texture. It may, therefore, be expected that the operation would prove less fatal than when performed in the usual way; and that the stump would be less apt to prove imperfect, through protrusion of the bone. These expectations derive encouragement from the results of amputation at the ankle-joint, to which I was led by similar considerations. Of twelve cases in my own practice, and in nearly as many more in that of other practitioners, who have been induced to adopt it, this operation has not in a single instance been followed by either death of the patient, or exfoliation of the bone; and so far from selecting favourable cases for the purpose, I have repeatedly removed the foot, in circumstances where I should have declined amputating the leg as altogether desperate."

Mr. S. relates two cases, as directly supporting the operation which he recommends, one of which we subjoin:

"Jane Marshall, aged 22, was admitted on the 20th December, on account of disease in the left knee: It admitted of hardly any motion, was very painful, and over the patella exhibited two small openings which admitted a probe to pass into the joint. She had been suffering from this complaint nearly three years, in the course of which the frequently repeated application of moxa and various other means were said to have failed in affording any relief. After her admission the symptoms obstinately increased,—at length preventing sleep, destroying appetite, and threatening, before long, to prove fatal. In these circumstances it was resolved to amputate the limb on the 6th of March.

"Profiting by former experience, I on this occasion made the anterior semi-lunar incision on a line with the *lower* edge of the patella, and had the integuments retracted before cutting into the joint above this bone. In other respects the operation was conducted as the first one had been, and when the edges of the wound

were approximated, they came easily together, presenting a proper degree of fullness, without any straining or tension. The union was nearly completed by the first intention without any local or constitutional disturbance; the flaps, instead of showing any tendency to retraction, rather becoming more full and soft; and the patient presenting the aspect of one who had sustained some trivial injury, rather than undergone a capital operation. On the 14th day she was sitting by the fire, and took the dressings off without any assistance.

This case, Mr. S. thinks, should remove any doubt that may have existed as to the safety of amputating at the knee, and consequently as to the expediency of doing so with a view to avert the danger of operating through the shaft of the thigh bone. "It is upon this ground that I wish," he observes, "to found the operation, and therefore I have said nothing of some other advantages which might be mentioned,—such as the greater length of stump which, especially in females, must be desirable for the sake of appearance, and may, perhaps, be made available for using a support admitting of flexion at the knee,—or the facility afforded to employing the tourniquet, which causes serious embarrassment in removing the limb at any higher point. Some surgeons have objected to the tourniquet, that it may be managed, or rather mismanaged, so as to increase instead of restraining the hemorrhage. But any inconvenience from this source may be easily prevented by ordinary attention,—while on the other hand it is certainly desirable to obtain a sure command over the circulation, not liable to be disturbed through fatigue of the fingers effecting manual compression, or involuntary movements of the patient, and which leaves the principal assistant at liberty to tie the vessels. I may add, that there has long seemed to me considerable reason for suspecting, that pressure in the groin is not altogether free from risk of causing inflammation of the vein, when there is a predisposition to such derangement, since I have repeatedly witnessed the marks of inflammatory action in such cases, solely, or chiefly in the inguinal region, when examination was instituted after death. I am persuaded also that the patient's sufferings will be diminished by amputating at the knee; and that the operation would prove less disagreeable to the surgeon than the one in common use."

"I may here remark, that the posterior flap must be made very long, and indeed to the full extent of the fleshy part of the gastrocnemii muscles,—care being taken, however, to avoid preserving more than a moderate portion in regard to thickness."

39. *Amputation of a Finger by a new method.*—A robust man had a deep-seated suppuration of the middle finger with necrosis of its phalanx. The removal of the finger at the phalango-carpal articulation became necessary. M. ROBERT performed the operation in the following manner. He first made a longitudinal incision along the dorsal aspect of the articulation, extending from the prominence of the joint to about the middle of the first phalanx, in the direction of the axis of the finger: then turning the bistoury towards the radial side he made a lateral flap which he cut, with a single sweep from below upwards, to the articulation; opened the latter, disarticulated the phalanx, passed the knife behind it and cut the other flap in the usual manner. Two very long flaps were thus formed covering entirely the head of the metacarpal bone and affording the thickest possible cushion. Another patient operated on in the same way by M. Robert and now cured, allows us to judge of the effect of this mode of operating. The stump has a fuller and softer covering than by the ordinary mode of operating. It is readily seen, indeed, that by merely cutting two flaps by a double oblique or elliptical incision, which unite in the form of an angle on the top of the articulation, soft parts can scarcely be found to cover the head of the metatarsal bone, while on the other hand, if a longitudinal incision be first made, and then the two flaps from the middle of the phalanx, there is much more material for a stump. It is true that the operation is less rapidly done, and is less brilliant than the other, but this is of no consequence since the result is better. M. Denonvilliers had just amputated an index finger, very much after the same plan as that which M. Robert has pursued for a long time, and which M. Lisfranc formerly recommended in his lectures. M. Denonvilliers informs us that he adopts in all cases of oval amputations the same plan; that is, instead of commencing by marking out the angular shape of the flaps,

he makes at first a simple longitudinal incision which serves as a starting point for both flaps.—*Annales Thérapeutique Méd. et Chirurg.*, Oct., 1844.

40. *Extirpation of an Ovarian Tumour.* By Wm. B. PAGE, Esq., Surgeon to the Cumberland Infirmary, Carlisle.—(*Lancet*, April 5, 1845.) A woman, 33 years of age, was admitted into the Cumberland Infirmary, May 22, 1844, with ovarian disease, which had first appeared two years previously, at which time a small painful tumour was observed in the lower part of the right side of the abdomen. Health, previously good, has been of late gradually declining. The functions are regularly performed. Is subject to periodical attacks, about every seven days, of tenderness, and pain of a lancinating character in the right iliac and lumbar regions, accompanied with all the symptoms of slight febrile disturbance. These attacks were invariably relieved by rest in the recumbent posture, and the administration of small doses of hydrargyrum cum cretâ, and Dover's powder. The abdomen slowly but certainly increased in size, the attacks alluded to became more severe, and the inconvenience correspondingly great.

The abdomen appeared to be much enlarged, but more prominently so on the right side. By the hand, a globular tumour could be detected beneath the parietes, extending from the pubes below to the ensiform cartilage above, and occupying the limits of the iliac regions laterally; thus filling the whole front of the abdomen. It was distinctly movable, and might by pressure be made to ascend some inches from its natural position, and also could be readily moved towards either side, recovering its ordinary situation when the hand was removed. Its circumference was easily defined. The tumour was fluctuant, and dull over its whole surface on percussion, whilst the colon on each side was resonant. At an inch below the umbilicus, the abdomen measured thirty-four inches and a half.

On the 19th August, Mr. Page operated by making an incision four inches in length through the linea alba, commencing an inch below the umbilicus. The cyst was seized, punctured with a trochar, and after it was emptied, two ligatures were placed around its pedicle, and the pedicle divided. No hemorrhage following, the wound was closed. Complete recovery followed.

The tumour was a large globular cyst, with a smooth, white, external surface, containing nearly five pounds of fluid, its entire weight being five pounds and a half. The cyst was composed of five coats; the external, or peritoneal, retained its ordinary characters, except that it presented marks of recent inflammation and congestion in the punctiforme and maculiforme types. This redness was situated in the sub-peritoneal cellular tissue, which was denser than usual, and could be dissected off in a distinct layer. Beneath this came the somewhat dense, fibrous capsule of the ovary itself, of its natural thickness. Invested by this was that which appeared to be the proper tissue of the ovary, expanded into a thin layer, one-eighth of an inch in thickness, having a yellowish colour, and of its natural density; this was the seat of several small cysts, varying from the size of a shot to that of a bean, and containing a fluid similar to that of the larger cavity. The whole was lined by a thin semi-transparent membrane, which was elevated over three-fourths of its surface, by the deposit of a dark brown-coloured substance, between it and the last-mentioned layer, apparently of the same nature as the fluid in the sac.

The dissection of the tumour demonstrated that it was a disease of a Graafian vesicle; and the analysis of the fluid leads to the conclusion that it was of an analogous nature to, if not identical with, blood.

41. *Sanguinous or Aneurismal Tumours of Bone.*—M. Roux read before the French Academy of Medicine in February last, an interesting memoir on this subject. Osseous structure notwithstanding its density, M. R. observes, may become the seat of a transformation similar to that which, in the soft parts, constitutes sanguinous (erectile) tumours. The capillary vessels, more especially those which depend on the arterial system, become extraordinarily developed. Perhaps when they are thus amplified, the network which they form naturally may assume a different arrangement; perhaps the capillaries are differently interlaced, anastomosed. However this may be, as these capillaries become dilated and filled with blood, the bone softens, swells, and probably there is destruction of the pro-

per fibres of the thin lamellæ which constitute its substance. At last, the disease progresses to such an extent that the external lamellæ of the bone, even those formed by the compact tissue, are reduced to a kind of thin, flexible envelop, through which the pulsations of the tumour may be felt, and which rupturing divides into little fragments, or disappears entirely. This state of the osseous substance may be compared to aneurism; it is, indeed, an aneurismal state of the capillary system of the bone. The flat bones, which have a well-marked diploic structure, such as those of the skull and pelvis, and the spongy portion of the long bones, are the most liable to the disease. The immediate cause is nearly always a blow. As is the case in the soft tissues, sanguinous fungous tumours of bone are not always benignant; they may be endowed with a force of expansion and a rapidity of growth, which alone would render them extremely formidable, and present, on anatomical inspection, the most heterogeneous structure; or the cancerous element may manifestly be superadded. When this is the case, these tumours approximate very closely to the degenerescences of the osseous structure known under the name of *spina ventosa* or *osteo-sarcoma*. These latter appear to be merely different forms of cancer of bone, a disease which has been but imperfectly described hitherto, and which it will, perhaps, be ever impossible to delineate with precision, so great are the anomalies which it is susceptible of presenting. These tumours are so rare, that M. Roux has only seen a few well-marked cases during his long surgical career.

The only methods of treatment which can be adopted with any chance of success are—the ablation of the tumour along with the part of the bone which is diseased; the amputation of the entire part or organ affected; and, lastly, the ligature of the principal artery of the diseased region. M. Roux, after entering into these details, narrates the following cases:—

A Swiss lady left a distant colony to consult the Paris surgeons for a tumour of the head which she had had for three or four years, and which was increasing. M. Roux found that the tumour was a fungous sanguinous tumour, occupying nearly the entire left parietal region. It seemed to have had its origin in the diploic tissue, and had appeared after a contusion. The scalp was raised and distended, but not modified in its texture. The circumference of the tumour was irregular, and it was evident that it had not originated in the interior of the cranium, and forced its way through the bones, as is the case with fungous tumours of the dura mater. The tumour presented distinct pulsations synchronous with those of the arteries. There were slight symptoms of cerebral compression. The only chance of cure was evidently the ablation of the tumour, but this operation M. Roux refused to perform. The entire diseased region was, however, extirpated, at a later period, by a Geneva surgeon, and the patient died, but not until some days after the operation.

M. Roux has twice tied the principal artery of the limb in this disease: in the first instance, he was unsuccessful; in the second, successful. His first patient was a man-servant, six-and-thirty years of age, who entered the Charité on the 5th of November, 1830. Seven months previously, after squeezing a sponge with considerable violence, he experienced a sharp pain in the right wrist. A small tumour soon appeared on the anterior surface of the radius, underneath the radial artery, near the wrist-joint, and rapidly increased. It had, at first, been considered to be one of the cysts which are frequently observed near the wrist. The tumour occupied a little more than the inferior fourth of the radius, and presented a deep fluctuation; a kind of dry cortical lamella was felt to cover the fluctuating region. There was no pulsation. An exploring puncture having been made, arterial blood issued forth. The tumour then increased rapidly, became unequal in surface, and the seat of pulsation. It was considered to be of an aneurismal character, and the brachial artery was tied. No accident followed the ligature, and the tumour at first diminished, but about six weeks after the operation it began again to increase rapidly. Amputation of the forearm was deemed necessary, and performed, but the patient died of purulent resorption on the ninth day after the operation. The tumour, on examination, was found to be limited to the radius, the inferior third of which was completely destroyed, and presented partly the characters above described as belonging to the aneurism of bone, and partly those of softened cancer.

In the second case, the patient, a quarryman, aged twenty-five, felt a severe pain in his knee whilst lifting a heavy stone into a cart. The pain remained slight for eighteen months, when it became too severe to allow him to work. On his admission, there was a tumour, similar in its physical character to the one above described, occupying the head of the left tibia. This tumour, about the size of the fist, was principally developed anteriorly to the head of the fibula. The pulsations were very evident, and ceased on compression of the femoral. This artery was tied by M. Roux, in February, 1844, and the patient left the Hôtel Dieu, quite cured, in the following July. Nearly all trace of the tumour had disappeared.—*Lancet*, April 5, 1845.

42. *On the Pulsating Tumours of Bone; with the account of a case in which a ligature was placed around the common iliac artery.* By EDWARD STANLEY, F. R. S., Surgeon to St. Bartholomew's Hospital.—The author remarks that there are three distinct sources of pulsation in the tumours of bone—1, the proximity of the tumour to a large artery; 2, the development of blood-vessels and blood-cells, constituting a sort of erectile tissue within the tumour; 3, the enlargement of the arteries of the bone in which the tumour has arisen. Proximity to a large artery is the most frequent source of pulsation in these tumours, of which six examples are brought forward. Three occurred at St. Bartholomew's Hospital. In one of them, an encephaloid tumour originating in the humerus, the ligature of the sub-clavian was recommended, but not assented to by the patient. In another, it was agreed in consultation that sufficient ground existed for believing the tumour to be a popliteal aneurism, and accordingly the femoral artery was tied in the middle of the thigh. The tumour consisted of a compound of soft fibrous and dense osseous tissue, the latter situated deeply and extending around the femur, in which it appeared to have originated. Of the other three cases, two were communicated by Mr. Hodgson, of Birmingham, and the third by Mr. Lawrence. The latter is already recorded in the 17th volume of the Transactions of the Society. There are six examples of pulsating tumours, differing in their nature and originating in different tones, but agreeing in the circumstance that no other source of pulsation was discoverable in them than the contiguity of large arteries. To the same class of cases the author considers that the important one related by Mr. Guthrie belongs, in which a medullary tumour about as large as an adult head, situated upon the right nates of a female, presented so decidedly the characters of aneurism, that it was believed to be so by Sir Astley Cooper and other experienced surgeons who were consulted upon the case, and accordingly a ligature was placed around the common iliac artery.

On the subject of pulsation in the tumours of bone dependent on the development of blood-vessels and blood-cells, forming a sort of erectile tissue within the tumour, Mr. Stanley remarks, that in the case of recent occurrence in St. Bartholomew's Hospital, there certainly was a structure capable of enlargement by the distension of its vessels and cells; and assuming these to have been continuous with the surrounding arteries, the rush of blood into this structure might give to the whole mass a pulsation resembling that of aneurism. Two cases are related, in which the pulsation of the tumour was ascribed to a similar cause. In one communicated to the author by Mr. John Lawrence, jun., the tumour, originating in the upper part of the femur, was more of a gelatinous than encephaloid character, and its gelatinous tissue formed more than one half its bulk. The other, which was furnished by Mr. Luke, of the London Hospital, was a tumour of the lower part of the femur, and, in consequence of suspicion of aneurism, the femoral artery was tied. The limb was subsequently amputated, when the tumour was found to consist of cells of varying size, some of the largest being about an inch in diameter, and they were filled with blood.

Of pulsation in the tumour of bone dependent on the enlargement of the arteries of the osseous tissue, several cases are referred to; one related by Dupuytren, the others by Pelletan.

One circumstance in the history of these different forms of pulsating tumour is especially noticed by the author, as it appears to have a material influence on the production of pulsation in them,—this is, the density and resistance of the immediate investments of the tumour. He adds, that it may be doubted whether any

of these tumours would pulsate without the resistance derived in one or other direction from the bone or its coverings. A tumour originating in soft parts, and unconnected with any bone, but situated close to a large artery, and confined within resisting structures, and thus approximating in its conditions to the pulsating tumour of bone, may, like it, pulsate in a manner to be mistaken for aneurism. An example is given of a man admitted into St. Bartholomew's Hospital, under the care of Mr. Earle, with a pulsating tumour below the left clavicle, which presented all the appearances of aneurism, and accordingly a ligature was placed around the subclavian artery. The tumour subsided sufficiently to confirm the opinion entertained of its nature, and the patient was discharged. Six years afterwards he was again admitted with general derangement of the health, from which he sunk. On dissection, the axillary artery presented no indication of having been the seat of aneurism. Immediately behind the artery was a solid tumour, which had originated in the sheath of a large nerve.

After some observations tending to show the little value to be attached to the presence of bellows-sound in the diagnosis between aneurism and the pulsating tumour of bone, the author proceeds to relate the case of pulsating tumour of the ilium which has recently occurred in St. Bartholomew's Hospital, in which a ligature was placed around the common iliac artery. The patient, a man aged 42, had on the inner side of the right upper arm, a tumour about the size of a small orange, very loosely connected with the surrounding structures, free from pain, and without pulsation. This tumour was first observed about ten years ago, and during the last three years it had ceased to grow. The pulsating tumour of the pelvis had its chief attachment to the left ilium, and projected from both surfaces of the bone. It reached downwards to Poupart's ligament, and to the extent of about three inches into the abdomen. It felt moderately firm, and a little below the crista, near the anterior superior spine, a small movable piece of bone was discovered apparently involved in the tumour. Everywhere within reach of the fingers the tumour pulsated, not with a thrill or vibration, but with the deep heavy beat of aneurism. By the ear resting against the abdominal parietes, a bellows-sound was plainly recognized. After a minute description of the local features and constitutional phenomena of the disease, the author observes, that in deciding on the nature and treatment of the case, the following points were involved—was this pulsating tumour an aneurism? and if so, from what artery had it arisen; or was it one of the pulsating tumours of bone? He then states the arguments which, in consultation, led to a preponderance of opinion in favour of this tumour being an aneurism. In the uncertainty respecting the origin of the supposed aneurism from the external or internal iliac artery, the decision would obviously be that the common iliac should be tied, and the man having decidedly expressed his feeling in favour of submitting to the operation, the author considered it his duty to undertake it. The operation was performed on Monday, the 27th of January. The case proceeded favourably to the middle of the second day, when symptoms of peritonitis ensued, and he sunk on the morning of the third day from the operation. On examining the body, the effects of peritonitis were observed in the deeper parts and left side of the abdomen. In the wall of the left ventricle of the heart there was a medullary tumour about the size of a filbert. Medullary matter was found in the bronchial glands, and a few deposits of the same kind in the lungs. A minute description is given of the tumour in the pelvis, which was connected with the ilium, and composed of a spongy tissue with cells and convoluted vessels distributed through it. The tumour in the arm, which had all the marks of an innocent structure, was found, to the surprise of the author, identical in structure with the tumour in the pelvis.

This paper is concluded by some remarks on the operation of tying the common iliac, or the external iliac near its origin, tending to show that with the least risk of injury to the peritoneum, the readiest mode of reaching these vessels must be by an incision through the posterior part of the abdominal parietes.

Mr. Toynbee briefly referred to a case he had lately dissected of a young man who had died of consumption at the age of 19. The patient had a pulsating tumour of bone differing from Mr. Stanley's cases, inasmuch as it was almost entirely composed of blood-vessels, and contained no cells or other structure. It was situated at the point of ossification of the parietal bones.

Mr. Ferguson regarded the paper of Mr. Stanley with much interest. It showed the great difficulty which experienced surgeons might encounter in deciding on the true nature of certain kinds of tumours connected with the pelvic region. He had seen several cases similar to those brought under notice by the paper. Two of these cases had been under the care of Mr. Syme, of Edinburgh, and illustrated the diagnosis of these cases, even to experienced and able surgeons. These cases occurred during his (Mr. Ferguson's) connection with the Royal Infirmary, and he had consequently had an opportunity of seeing them. Mr. Syme had published them in his Clinical Reports. In one of these cases there was a swelling in the situation of the external iliac artery, which was considered to be aneurismal; other surgeons, however, were of a different opinion. Mr. Syme, however, acting chiefly on his own responsibility, determined upon placing a ligature high up on the external iliac, or on the common iliac artery, as might seem advisable. On completing the incisions through the abdominal parietes, it was discovered that the tumour was not an aneurism; it was nevertheless removed, and the patient sunk a few days after the operation. It was then discovered that tumours of a similar kind were situated in various parts along the course of the chief arterial vessels; they were smaller in size than that removed, but it was evident they owed any pulsation they possessed to their connection with the arteries. In a second case, in which a tumour was also situated in the course of the external iliac, much difference of opinion existed amongst the most distinguished surgeons of Edinburgh respecting its true nature. Eventually a ligature was placed round the common iliac artery. The patient died, and the tumour was found to be aneurismal. Another case, which had come under the observation of the speaker, resembled in many points the cases mentioned by Mr. Stanley. The pulsation and the *bruits*, said to be diagnostic of aneurism, were present; he, however, refused to operate. He was led to this determination from having recently become acquainted with Mr. Guthrie's case, to which reference had been made in the paper. After death the tumour was found to be very similar to the cases mentioned in the paper. The tumour was prominent in the pelvis both internally and externally, and the os innominatum was completely destroyed. The tumour was composed chiefly of medullary matter, clots of blood, and spiculae. Mr. Nicol, of Inverness, about the time of the occurrence of these cases, had treated a tumour connected with the upper part of the shoulder-bones, supposing it to be aneurismal.

The case was similar to one related by Mr. Luke, inasmuch as the tumour had resulted from an injury. A ligature was placed round the subclavian. At first the operation appeared successful, but the patient soon died, and the tumour was found to be malignant.—*Lond. Med. Gaz.*, March 21, 1845.

43. *Reduction of Dislocations of the Shoulder.*—(*Lond. and Ed. Monthly Journ. of Med. Sci.*, April, 1845.) Mr. JAMES SYME has repeatedly effected reduction of very recent dislocations of the shoulder-joint, without any assistance, by placing one hand on the acromion, and then having bent the forearm to a right angle, suddenly drawing the elbow backwards, so as at the same time to rotate the hand backwards. He relates the following case. A patient came from the country, a distance of twelve miles, for the purpose of having a dislocation of his shoulder reduced. Seeing, says Mr. S., from the position and powerless appearance of the arm, that the bone was displaced, and having felt, by putting my arm under his clothes, that its head lay in the axilla, I desired him to take off his coat. No sooner had this, with some assistance, been accomplished, than he declared that he felt his shoulder quite right, which it really was, no doubt from the action required for withdrawing his arm from the sleeve.

44. *Remarkable case of Penetrating Wound of the Abdomen in a Pregnant Woman.* By M. SCARUFFI.—The following case is certainly one of the most extraordinary recorded in the annals of science, of the introduction of a foreign body into our tissues. Remarkable at once from the considerable size of the body, it derives additional interest from the fact that the woman thus injured was pregnant at the time, and from the fortunate recovery which followed so serious a wound.

On the 4th June, 1843, at 10 o'clock A. M., a woman 24 years of age, the mother of two children, and now five months advanced in pregnancy, was en-

gaged in picking leaves from a mulberry tree, when the branch upon which she was standing broke, and she fell upon a stake placed near the tree. Some persons who were attracted by her screams, seeing her stretched upon the ground, endeavoured to raise her; but they experienced great difficulty, for the stake, which had penetrated very deeply into her thigh, riveted her to the ground.

The first attempts at extraction served only to break the stick at a point seven inches within the substance of the thigh which it had entered. Having no longer any hold upon the stick, the physicians had the patient conveyed to the hospital, where M. Vannoni saw her. Her face was pale, eyes sunken and dull, surface cold, pulse small and weak, respiration feeble, speech hesitating, with nausea and vomiting; she had not been able to urinate since the accident occurred, 15 hours before. On the posterior part of the thigh, and a little towards its inner aspect, just below the superior third, was a lacerated and contused wound four inches wide, involving the skin and muscles. Another wound of the same kind, but only four or five lines wide, and almost confined to the skin, existed in the left lumbar region, on a line with the exterior margin of the sacro-lumbalis muscle. Here a tumour was felt, hard, slightly movable, traceable as far as the antero-superior spine of the ilium, and seeming at this point to disappear in the lower pelvis. If this was touched, the patient experienced pain extending from the wound of the thigh towards the tuberosity of the ischium, and more severely towards the wound in the loins.

Its removal was commenced $2\frac{1}{2}$ hours after the entrance of the patient. The stick was broken at a point too deep to be reached from the wound in the thigh; it was necessary to cut down upon the tumour which it formed in the lumbar region, first through the integument, then the muscles, and finally the peritoneum. The index finger of the left hand was then introduced, and a probe-pointed bistoury slid along upon it, by which the aperture was enlarged. It was necessary to push down the piece of wood in order to disengage it from the two lower ribs, which its superior bifurcated extremity had in a manner clasped on their inner face. It was then seized with a pair of stone-forceps, and thus extracted,—a knotty stick eight and a half inches long, and between three and four inches in circumference. At the moment of its withdrawal one of its bifurcations was broken. Immediately, M. Vannoni introduced his finger, to ascertain if there was any other fragment remaining; but he could feel only the uterus exposed. The edges of the incision were approximated by suture; and the wound in the thigh was closed by adhesive plaster.

The reaction was speedy, and so great as to render bleeding necessary. Abortion occurred at the end of six hours; the placenta exhibited an extravasation of blood upon its uterine surface.

The introduction of the catheter was requisite for several days. The next day, and the day following, the patient was bled twice, and was twice leeched. The cicatrization of the wounds was retarded by an attack of erysipelas, and by the escape of two pieces of bark, which were discharged on the 3d and 4th July.

When the patient left the hospital on the 11th Sept., the exact distance between the wound on the thigh, and that in the loins, was found to be seventeen inches and two lines.—*Gazette Médicale de Paris*, Dec., 1844, from *Gazette Toscana delle Science Medico-fisiche*, June, 1844.

45. Empalement by an Iron Spindle which penetrated the left buttock, and passed out by the right of the navel.—M. BESSEMS has published in the *Annales de la Société de Medicine d'Anvers* (Jan., 1845), an account of a case of penetrating wound, which in several points of view, is as remarkable as the one recorded in the preceding article.

The subject of this case was a lad 14 years of age, who fell from the top of a bed about four feet high, on an iron spindle blunt at the point, a foot long, and of the thickness of a large quill, which was inserted by its handle in a wooden block. After the fall, during which he experienced no particular pain, his body was inclined forwards and to the left, supported by the left shoulder resting against the wall and by the feet upon the ground; the thighs were slightly bent upon the pelvis.

On attempting to rise he felt himself pinned by the buttock, at the same time

perceived with surprise rather than fright the spindle protruding from the belly at the side of the navel, having moreover perforated in this situation his shirt and trowsers. Maintaining remarkable *sang froid*, he detached the axis of the block, and thus transfixed, walked down about a dozen steps of a staircase to call his mother, who pulled out the spindle, and then waited the arrival of a surgeon.

The axis had acquired only a slight curvature at the line of junction with the handle.

At his admission into the hospital three days after the accident, this patient presented merely two small round wounds; one on the anterior wall of the abdomen about three-quarters of an inch to the right of the navel, in the direction of a line drawn from thence to the anterior superior iliac spine; the other in the fold of the left buttock about two and a-half fingers' breadth from the anus. These two wounds, surrounded by a reddish circle, furnished a slight exudation.

The pain, which the preceding evening had been vague and radiating over the whole abdomen, was, on admission, very trifling, and confined to the margin of the front wound. Otherwise there was no morbid symptom; the belly was supple; appetite, digestion, stools, and urine, natural; not the least febrile reaction.

This favourable condition lasted up to the period of the patient's dismissal, twenty days after the casualty.

It would appear in this case that the spindle after penetrating the left buttock at two and a half fingers' breadths from the anus, must have traversed diagonally from below upwards the left half of the pelvic hollow and a part of the abdominal cavity in order to have forced a way out by the right of the navel. The anatomical disposition of the peritoneum is such that in this course the spindle must have necessarily rent this serous sac. Yet this lesion, reputed so serious by surgical writers, was not followed by any mischief.

Another remarkable particular connected with the above fact is the absence of visceral injury. If it be reckoned that during the vertical position in which the lad was when the thing occurred, the intestinal convolutions must have filled the entire pelvic cavity, it is difficult to conceive how an iron spindle could have passed through this cavity amid the convolutions without doing any hurt.

46. Paracentesis of the Thorax in acute Pleuritic Effusion.—M. TROUSSEAU communicated to the French Academy of Medicine, March 25, the results of three operations of paracentesis of the thorax successfully performed in effusion from acute pleuritis. The first of these cases differs from those previously published by M. Trousseau, in that the dyspnœa was not considerable. M. Trousseau made some reflections on the value of this symptom, as its absence might be deemed a contraindication of the operation. Dyspnœa and orthopnœa, according to M. Trousseau, do not constitute any measure of the degree or seriousness of the effusion, as they may not exist when the effusion is considerable, especially if it has formed slowly. According to M. Trousseau, the signs that constantly indicate the gravity and imminent danger of effusion, and which consequently call for the operation are, the displacement of the heart, whence result syncopes, displacement of the mediastinum, depression of the spleen and of the liver, acceleration and feebleness of the pulse, and an anxious countenance.

M. Trousseau mentioned a curious physical phenomenon which immediately follows the evacuation of the liquid—viz., the sudden ampliation of the thorax from the rush of air in the bronchial tubes, which is so intense that recently-formed adhesions are usually destroyed thereby.—*Dub. Med. Press*, April, 1845.

47. Diagnosis between Gonorrhœa and Leucorrhœa.—Dr. SKAE and Mr. BENBOW, in an interesting memoir on the statistics of the Lock Hospital of Edinburgh, in the *Northern Journal of Medicine*, April, 1845, state that they are convinced from their observations that the features described in works on forensic medicine as affording a means of diagnosis between gonorrhœa and leucorrhœa, are extremely fallacious. Gonorrhœa, it is said, affects the lower part of the vagina only, while leucorrhœa proceeds from a higher source.* This may be true in certain recent cases of

* See Beck's *Medical Jurisprudence, &c. &c., Art. Rape.*

gonorrhœa, the result of violence; but it is by no means true in the great majority of cases. In many instances which we have seen of the disease in its acute stage, the mucous membrane of the vagina was inflamed throughout its whole extent, and also that of the cervix uteri; while a discharge exactly similar to that secreted in the vagina was also seen issuing from the os uteri. And in chronic cases, on the other hand, so far from this statement being accurate, we believe that the discharge of gonorrhœa proceeds principally from the *upper* part of the vagina.

It may be said that the characters of the discharge will enable any one to distinguish between the two affections. This may also be true in some instances; the thin mucous discharge of the first stage of gonorrhœa, and the purulent discharge of the stage immediately succeeding, are certainly distinctive if taken in conjunction with the other signs of inflammatory action, and are no doubt diagnostic. But when the affection has assumed a chronic character, it is not distinguishable from leucorrhœa, either by reference to its seat or the character of the discharge; the discharge in both instances is the result of a similar condition of the same membrane, which in some cases is pale and relaxed, in others livid and congested.

48. Ligature of the External Iliac Artery for Femoral Aneurism.—Dr. JAMES DUNCAN relates in the *Northern Journal of Medicine*, March, 1845, a case of femoral aneurism successfully treated by a ligature to the external iliac artery. The subject of the case was a sailor 30 years of age, and the tumour which had originated nine months previously, measured six inches in length, extending from about an inch above Poupart's ligament downwards. The operation was performed as follows:—An incision dividing the skin and superficial fascia was made, commencing about an inch above the middle of Poupart's ligament, and carried upwards for about 3½ inches, in such a direction as to be, when it passed the anterior and superior spinous process, about an inch or more internal to it. It was slightly curved, the concavity being towards the mesial line. The aponeurotic expansion of the external oblique, the internal oblique, and transversalis, was divided to the same extent. The fascia transversalis was next divided to the requisite extent, the peritoneum carried inwards, and the vessel exposed. The thin fascia covering the artery was divided to a very slight extent, and the needle carried round the artery, with its convexity towards the peritoneum, counter-pressure being made with the forefinger of the left hand. As a small filament of the nerve lay over the needle along with the artery, another needle was passed from within outwards, the first being retained to serve as a guide. The vessel was now compressed over the needle, and immediately the pulsation in the tumour ceased. The ligature was secured, one end being cut close to the knot. The securing of the ligature was followed by immediate cessation of the pulsations, and collapse, to a certain extent, of the tumour. The wound was brought together by several points of suture, and lint wetted with cold water applied. The patient was laid in bed, with the limb slightly bent, and supported by pillows at the knee. The ligature came away on the 22d day, and by the end of February, a small hard knot could only be felt in the original seat of the tumour, and the man was well in all respects.

49. Proposal to treat Protracted Mammary Abscess by the Breast-pump and the Syringe. By ALEX. WOOD, M. D. (*Northern Journ. of Med.*, Jan., 1845.)—This proposal, which appears to be a novel one, and to be well worthy of trial, is as follows. “As soon as the indistinct fluctuation or rather the boggy feeling, by which the formation of matter in these abscesses can be detected, is distinctly ascertained, let a small bistoury or abscess lance* (the common lancet will sometimes not penetrate deep enough) be carried down until the matter begins to escape. After all that can be squeezed out by pressure is removed, let the breast-pump be applied over the orifice, and the rest of the matter be drawn out. The sinus is then to be injected with some astringent solution, by means of a small syringe. The syringe employed is the small glass one for the urethra, sold by most apothecaries. The lotion I have hitherto used is the one recommended by Mr. Hey, though it may be doubtful if it possesses any peculiar advantages. R. aquæ

* A subcutaneous incision-knife would answer well.

puræ ʒ xv; spt. rosmarin. ʒ i; spt. lavandul. com. ʒ i; zinci sulphat. gr. xxx.—M. fiat lotio. The sulphuric acid lotion of Sir A. Cooper will probably answer as well.

"A pledget of lint dipped in the lotion is then to be applied outside, and covered with oiled silk; over this a compress may be placed, and firm pressure maintained on it by means of adhesive plaster. In some cases the walls of the abscess will unite at once, and all that remains to be done is to trust to time for the removal of the surrounding induration, or to attempt to discuss it by frictions with camphor liniment, mercurial or iodine ointment, or the application of the emplast. ammoniaci cum hydrargyro.

"Where the surfaces do not thus unite, the falling in of the breast, produced by the exhaustion of the glass, will be found to have disappeared; the cavity in such cases has only to be injected two or three times a-day, which will serve at once to keep the opening free for the discharge of matter, and will also tend to arrest the further extension of the ulcerative process.

"The treatment of acute and more superficial abscess may be conducted on the same general principles. The early evacuation of the matter saves the patient much suffering, and also enables the nursing on that breast to be resumed at a much earlier period. The cicatrix is also much smaller than in cases where the matter is allowed to discharge spontaneously; indeed, if the incision be made in the direction of the natural folds of the breast, that is, radiating towards the nipple, the cicatrix will in a short time be imperceptible.

"Dr. Wood has tried this plan in three cases, and with results which warrant him in suggesting it to the consideration of the profession."

50. Dissecting Aneurism of the Thoracic Aorta. By R. L. MACDONNEL, Esq. (*Lond. Med. Gaz.*, March, 1845.)—A woman, 50 years of age, in apparently good health, awoke towards morning with exruciating pain in the epigastric region, and in about an hour afterwards suddenly expired. The following appearances were revealed on dissection. The pericardium contained about four ounces of serum tinged with blood and some coagula; the membrane was in other respects healthy. A firm mass of coagulated blood completely surrounded the great vessels. This coagulum was bound down by the thin layer of serous membrane which passes up from the heart along the vessels, to be reflected on the fibrous layer of the pericardium. The left ventricle was dilated and hypertrophied. The semilunar valves were all in that condition termed atrophy, viz., they were perforated in different parts, but more especially towards their free margins, with small, round, and oval-shaped holes; and in other situations they were very much thinned. The aorta, in the situation of the attachment of the valves, was healthy; but about an inch from this situation, there was a laceration extending transversely, and with edges as well defined as if cut with a scalpel; it penetrated the internal and middle coats of the artery, but left the external one quite whole; it was one inch and three-eighths in extent, and from it a probe could be passed downwards, between the external and middle coats, as far as to a level with the upper border of the semilunar valves; but farther than this, *i. e.*, behind the sinuses of Morgagni, it could not be passed. The orifice of this slit was partially closed by a coagulum of pale fibrin, and on tracing this up we found that it lay between the external and middle coats of the vessel, but did not extend far, and was not attached. A probe passed upwards, advanced as far on the right side as to the division of the innominata, and for about half an inch along the course of the left subclavian and carotid arteries, to which extent the middle tunic of these vessels was separated from the outer one; but the space was not occupied by a coagulum; it appeared as if the separation had been the effect of a violent pumping of blood between the coats of the vessels, which had afterwards burst into some other situation, leaving this space empty except towards the laceration, where there was a pale fibrinous clot.

The opening in the cellular coat through which the blood escaped, was round, about the size of a fourpenny-piece, and was filled with a dark coagulum, which extended downwards, closely embracing the aorta, and separating this vessel from the pulmonary artery at the exact point where, in health, they lie in apposition. In this situation the coagulum exercised a considerable compression on the pul-

monary artery, by which the vessel was much flattened. The coagulum lay beneath all that portion of the reflected layer of pericardium, extending from the *zonæ tendineæ* of the right and left ventricles to where it is reflected on the under surface of the fibrous layer of the membrane. The serous membrane was perfectly whole, except at a small point corresponding to the junction of the right ventricle with the left auricle, where there was a small aperture through which the small quantity of blood in the bag of the pericardium had evidently escaped. The clot was hard and solid, and was fixed in its position, from its being completely entangled in the cellular tissue lying between the serous membrane and the outer coat of the arteries, and between these two vessels at the point where the pulmonary artery passes anterior to the aorta; in this spot the coagulum was thicker than in any other.

The coagulum occupied exclusively all that space external to the vessels, and underneath the serous membrane; it passed downwards on the auricles to where they join the ventricles, and it also passed some way upwards, beneath that membrane which anatomists describe as descending from the deep layer of the cervical fascia, to become continuous with the fibrous layer of the pericardium.

In other respects the aorta was extensively diseased, being thickly coated from the commencement of its transverse portion, all along its descending course, with bony plates and atheromatous deposits. Indeed, the only part of the artery which appeared free from this disease was the very situation where the laceration took place; for immediately to the left of the opening there was another large osseous deposit. On comparing the middle and internal coats of the artery, at the seat of rupture, with other parts, they were found to possess scarcely half the thickness, and were much more friable, though the vessel did not present, in any part, traces of acute inflammation. Towards the commencement of the arch the vessel was somewhat dilated, but not to a greater extent than is ordinarily observed in individuals of her age.

The mouth of the innominate was filled with a dark and firm clot, which extended for some distance along this vessel and its two divisions, and appeared to have been produced by the mechanical pressure exercised on it by the clotted blood which lay between its outer and middle coats. The lungs and liver were greatly engorged, no doubt the result of the mechanical pressure exercised on the veins leading from them, and of the almost complete obliteration of the cavities of the auricles.

51. *Treatment of Hemorrhoids with Chromic Acid.*—ALEX. URE, Esq., reports in the *Lond. Med. Gaz.*, (March, 1845,) two cases of hemorrhoids successfully treated with chromic acid. This substance is a most powerful oxidizing agent, and is exceeding convenient of application, inasmuch as it consists of a thick crystalline pap, which, when rightly managed, does not spread beyond the prescribed limits; and so soon as its erosive operation is finished, it passes into the state of inert pulverulent sesquioxide.

The first case was a tailor 31 years of age, who had, at the verge of the anus, a dark hemorrhoidal tumour, the bigness of half a walnut, of which the surface is ulcerated and extremely painful. The tumour had been extruded several days, and various attempts at reduction proved of no avail. The patient seemed in a most deplorable state, haggard, and worn out by suffering, from which he could only obtain a brief respite by observing a half bent posture. He had been subject to piles for some years. The bowels were open. Mr. U. applied the chromic acid freely over the whole of the diseased surface.

April 29th.—Patient says that he felt considerable uneasiness in the part during the whole afternoon following the application. He is now quite comfortable in all respects. A considerable slough has been detached, and the excrescence is withered and shrunk to the bulk of a raisin. Bowels confined. Half an ounce of castor oil.

May 1.—Complains of a feeling of aching referred to the sacral region; bowels torpid; inappetence for food; sense of languor and listlessness. To take an ounce of compound infusion of gentian, with a drachm of Epsom salts, every morning.

May 13.—Perfectly cured. The trifling remains of the pile are wholly insensible, and create no inconvenience whatever; his bowels act naturally.

The second case was a married woman, aged 50. For a month previously she had been suffering much from two hemorrhoids situate upon the right side of the verge of the anus, each about the size of a kidney bean, and was anxious to obtain alleviation. Various external and internal means had been already employed, but in vain. She had been troubled with piles at different times during the preceding eight years. Her general health is tolerably good, and the bowels usually regular. Since her last confinement, ten weeks ago, she has complained of shooting darting pain referred to the anus. It was determined to apply chromic acid, which was accordingly done May 30th. It was found necessary to repeat the application on the 1st of June. This caused acute burning pain both times, destruction to a considerable amount of the diseased texture, consolidation of the remainder, and permanent relief from the distressing ailment.

52. *On the Formation of Bone by the Periosteum.* By ALEX. WATSON, M. D.—(Ed. *Med. and Surg. Journ.*, April, 1845.) It was long believed that the periosteum not only conveyed nourishment to the bone which it enveloped, but also mainly, if not solely, contributed to the reproduction of bone in cases of necrosis and fracture. Latterly, however, the accuracy of this opinion has been called in question, and Prof. Muller, of Berlin, maintains that the periosteum has nothing to do with the production of bone. The difference of opinion entertained on this subject led Dr. Watson to enter into a minute and careful investigation of it, and the following are the conclusions at which he has arrived:—

1. That the theories alleging that new bone is formed only by the living parts of the old bone, in cases of necrosis and fracture, are incorrect.
2. That the periosteum has evidently the power to produce new bone of itself, without the aid of the old bone.
3. That the formation of new bone by the periosteum consists, at first, in the deposition of osseous matter in the form of a fine microscopic net-work; and, therefore, that the Haversian canals are only a secondary, not a primary formation in osseous tissue.
4. That in cases of necrosis and fracture, the process of reproduction of bone by the periosteum is the same.

53. *On the Microscopic Texture of Cancer.*—M. DESORMEAUX has recently published a valuable inaugural dissertation entitled *Recherches sur la theorie elementaire de la production des tissus accidentels*, in which he has given an excellent summary of all the recent researches on the intimate structure of cancerous formations.

Müller, and (since the publication of his writings) most other pathologists, has arranged these morbid growths into two great families or groups, viz., the Encephaloid and the Scirrhou. Of the former he makes the following three subdivisions.

1. Carcinoma medullare, in which there is a predominance, in the medullary mass, of round globules over loose fibrous tissue. The globules are of various sizes; but the smallest are larger than pus-corpuscles. Each contains a granular substance or nucleus within. They are very similar, in many respects, to those of common cancer, and of reticulated carcinoma or scirrhus.
2. Carcinoma medullare, consisting of pale, elliptic, non-elongated corpuscles, and of a fundamental cerebriform mass. These corpuscles are usually twice or three times as large as the globules of the blood. There is never any appearance of fibres proceeding from their surface, and they rarely exhibit any traces of nuclei within them.
3. Carcinoma medullare with fibrated or fusiform corpuscles. This species of Encephaloid structure has at times, on laceration, a sort of fibrous aspect, when the fusiform corpuscles are arranged in a somewhat determinate direction. According to the direction which they assume, the morbid mass will present a radiated or a tufted appearance. In many cases, indeed, their directions are so various that the lacerated surface exhibits no trace of fibres anywhere. The fusiform corpuscles are sometimes nucleated; at other times they contain granular points, but without distinct nuclei. They are elongated on one or two sides into fibres of different lengths. They may be considered as cells that are arrested at the period of the process of transition from the cellular to the fibrous condition.

The three forms of the disease now described may (most probably) be regarded as so many degrees or stages in the development of the same tissue; these successive stages being characterized, 1, by rounded nucleated globules; 2, by elongated ovoid globules, which are either non-nucleated, or indistinctly so; and, 3, by fusiform globules.

These several kinds of globules may be regarded as so many successive epochs of evolution, through which a *cell* must pass before it can become a fibre. Thus we find that, in an Encephaloid mass, there is the same transformation of the primitive elements as occurs in many normal tissues—with this difference only, that the process of evolution is not complete, being arrested before the fibrin is perfectly formed. There is a perfect analogy in their mode of formation. The essential element of an encephaloid tumour is the presence of cells. In some cases the entire mass is composed of them, placed one alongside of the other, but without having any perceptible bond of union; while in others, there is a network of fibrous or cellular tissue interposed between the cells. When this fibrous tissue prevails, the encephaloid then approaches in characters to the scirrhus structure. In the latter, the existence of the two elements—cells and fibres—is always more distinctly marked than in the former. The fibres are often quite perceptible by the naked eye. Sometimes they are lengthened and run parallel to each other: at other times, they form rounded capsules, within which the globules are contained. As in the case of the newly-formed fibres of the cellular tissue, so those of a scirrhus formation are destroyed by acetic acid, leaving nuclei or nucleated fibres behind. The fibres sometimes exhibit at different points a sort of varicose enlargement, within each of which a nucleus is found. This appearance is often observed in fibrous tumours (not genuine scirrus) of the uterus and other parts.

In the *reticular carcinoma* of Müller, the white network, which encloses the scirrhus globules in its meshes, is formed of round opaque granulations, three or four times as large as the blood-globules; they are occasionally agglomerated into rounded masses. The genuine scirrhus tissue, of a pale grayish colour, is composed of globules that, on the whole, resemble those of the first stage of an encephaloid formation. These globules are either round or somewhat oval: along with them we find free *nuclei* with their *nucleoli*.—(Vogel.)

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From a variety of observations we may reasonably conclude that the cells of scirrus are formed around the nuclei of which M. Vogel speaks; their contents are at first granular and almost opaque. When the process of softening commences, the granulations disappear, the globules become transparent, and within them are formed new cells, which at first are few in number, and gradually multiply, until they entirely fill the parent cell. M. Valentin, who, in part at least, admits this account of the progress of the cells, says that the parent cells eventually burst and discharge their cellules: in this way we may account for the presence of young free cells in scirrhus formations that have become softened.

The intercellular substance seems to undergo certain modifications corresponding with the evolution of the cells; the granulations or granular points, which it often contains, usually disappear, and it becomes limpid, while at the same time the space, which it occupies, is diminished by the enlargement and multiplication of the cells.

The fibrous network does not appear to follow in its alterations the development of the cells: it may remain firm and resisting, while the cells are far advanced in their evolution. Even when a scirrhus tumour has become completely softened, this tissue sometimes forms shreds that retain their original character.

In *alveolar cancer*, the basis of the morbid tissue consists of white fibres and lamellæ, which cross and intercross with each other, intercepting between the meshes thereby formed limpid cells, either closed or communicating with each other, of various sizes from that of a grain of sand to that of a large pea, and filled with a transparent gelatinous substance. In this substance there are cells, and these cells contain other cells more minute. The smallest of these cells exhibit at one point of their parietes a distinct dark-yellowish nucleus, and sometimes also many free and unattached granules floating within them. To this species M. Müller refers the *gelatiniform* and *areolar cancers* of Laennec and Cru-

veilhier. The cells of this species of the disease appear to be only an advanced or more mature degree of the cells of scirrhous.—*Med. Chirurg. Rev.*, April, 1845, from *Journal de Chirurgie*, Oct., 1844.

54. *Ligature of a Polypus of the Bladder.* By Dr. THIENEMANN.—Augusta S., 45 years of age, unmarried, had long complained of pain and difficulty of making water, of bloody urine, &c.; when one day suddenly a dark red body, which bled freely, presented itself between the labia. Careful examination discovered it to be a polypus, the size of a hen's egg, and projecting from the urethra, which could readily be entered with two fingers, and the pedicle of the polypus, which was one third of an inch thick, followed into the bladder, without however getting to its point of attachment. I succeeded in throwing a ligature around it by means of two elastic catheters, and then with a proper canula, constricted it as far within the bladder as I could reach. On the third day the ligature was tightened, and on the sixth the polypus fell off. The patient recovered completely.—*Lond. Med. Gaz.*, Nov., 1844, from *Medizinische Zeitung.*, No. 9.

55. *Re-establishment of Nervous Action after Autoplastic Operations.*—M. JOBERT (de Lamballe) in a memoir read before the French Academy of Sciences in February last, states the following to be the results of his experiments on man and animals:—1st. Immediately after autoplastic operations, sensibility diminishes or disappears in the flaps, the diminution of the sensibility being directly in reason of the loss of blood. 2d. The section of the pedicle is followed by complete loss of sensibility, but after a certain length of time it reappears, and increases in the same proportion as the vascularity; both sometimes increase beyond the limits of the normal state, but always simultaneously. The anatomical examination of the pedicle gives the following results:—1st. After its section, the flaps are separated from all parts of the economy by cicatricial tissue. 2d. The only means of communication that exist between the flaps and the rest of the economy, are the vessels, more or less developed, which pass through the cicatricial tissue; no nervous filaments are ever met with. 3d. The nerves which existed primitively in the flap become atrophied, and may end by disappearing. 4th. Those of the neighbouring parts stop at the level of the cicatrix. Sometimes they are suddenly interrupted, presenting a kind of swelling of the neurilemma; sometimes they lose themselves in the cicatricial tissue, but it is never possible to follow them into the flap.—*Lancet*, April 5, 1845.

56. *Severe injury of the Thigh.*—A young man was thrown from his horse against a carriage, the shaft of which penetrated the limb, entering on the inner part and coming out at the opposite side, passing between the mass of muscles and the femur. The patient lost a great deal of blood, and was carried to the Beaujon Hospital; the main arteries, however, did not seem to be injured. The stupor into which he was plunged, determined M. ROBERT to order for him strong coffee, which had an excellent effect, the patient recovering promptly from the shock. The case appeared to be doing very well for several days, when the patient was attacked with a tremendous hemorrhage from the wound, under which he sank. At the autopsy, the superficial crural artery was found at one point to be ulcerated, and opened; stretched, contused and ecchymosed at others. The internal coat was torn in several spots, and the middle injured by the stretching. So that, even if the artery had not been opened by ulceration at one of the contused points, the patient would have had, sooner or later, several aneurisms in the course of the limb. Such very severe injuries are rarely met with; it is probable, however, that had it not been for the unexpected hemorrhage, the patient would have recovered.—*Annales de Thérapeutique*, Oct., 1844.

57. *Treatment of Syphilitic Affections.*—At a recent meeting of the Surgical Society of Ireland, the proceedings of which are reported in the *Dublin Medical Press*, an interesting paper was read by Dr. M'EGAN, on the diagnosis and treatment of syphilitic diseases. In the discussion to which this paper gave rise, the president, Mr. Carmichael, took occasion to give a brief account of the origin and progress of his own investigations on the subject, and after alluding to the opposition which his

views had at first encountered, and exposing the attempts which had been made to suppress them, by some practices of very questionable character, concluded by making the following observations in reference to the employment of mercury.

1st. I do not think it necessary in the treatment of the simple primary ulcer without induration, nor for the papular eruption, and other constitutional symptoms it produces; but should the eruption linger into the fourth or fifth week after it has desquamated into scaly spots or blotches, mercury in alterative doses, either in the form of Plummer's pill or the proto-ioduret of mercury, will be of service in clearing the skin of the eruption, and in removing the pains of the joints, which are constantly present in this form of venereal. But I protest most strongly against the use of mercury at the period when the eruption first appears in its papular form, at a time that it is usually preceded and accompanied by considerable fever, like all the other exanthemata, to which class of Cullen it obviously belongs. If we should exhibit mercury prematurely during the eruptive stage of this as well as the other forms of disease, the scaly excepted, we may possibly clear the skin of the eruption, but in all probability it will return again and again, to the great disappointment of the patient and perplexity of the medical attendant.

2d. For iritis I would give mercury, so as to excite its full effect upon the system, and at the same time not neglect the usual antiphlogistic measures to remove this dangerous inflammation.

3d. For nodes I would exhibit mercury, and I think the iodide of that mineral for their removal is superior to any other preparation.

4th. For phagedenic primary ulcers I have always found mercury most injurious. They are most successfully treated by the application of strong nitric acid, immediately followed by a douche of cold water. The same application is also the most efficient for phagedenic ulceration of the throat, which if not checked will soon extend over the velum, uvula, and back of the pharynx, from whence it will spread upwards into the nares, and downwards into the larynx; in either of which situations I need not state the difficulty and danger of the case. Instead of the douche of cold water, in this situation inadmissible, I employ a probang; the sponge moistened in a solution of soda or potash will neutralize any superabundant acid applied to the ulcers. During the eruption of pustules or tubercles which cause those crusts termed rupia, I have found mercury injurious, although its exhibition may at first flatter both patient and surgeon that the disease is yielding to this remedy. But the natural tendency of this eruption is also to become scaly after it has existed several weeks or months. This scaliness is a sign that the disease is on the decline, and indicates that mercury in alterative doses may then be employed with safety and advantage. Should any of the constitutional ulcers on the skin spread after the rupia crusts fall off, their progress may also be effectually checked by the application of nitric acid to their phagedenic margins. They of themselves first show signs of healthy reparation in their centres, which need not therefore be meddled with. Mercury in this stage of the disease should not be exhibited. Hydriodate of potash, sarsaparilla, country air, and the tranquilizing effects of opium, should the patient be harassed by extensive ulceration, are the constitutional means most to be relied upon.

5th. For the true Hunterian chancre with hardened edge and base, and for the scaly eruption which attends it, as well as the deep excavated ulcer of the tonsil, nodes, and other symptoms belonging to this form of the disease, mercury may be esteemed a certain and expeditious remedy.

These are the views I entertained more than thirty years ago, as appear from my various publications on the subject; and it surprises even myself not a little that after so long an experience, I have felt no occasion or necessity to depart from them. But I have often been pained at finding that many of the profession, particularly in the army, range themselves under the denomination of mercurialists or anti-mercurialists—*i. e.*, they either exhibit mercury in all venereal cases or refrain from it in every instance, regardless of the characters of the symptoms and stages of the disease. It may, however, be satisfactory to those who are indolently disposed, and wish to follow routine practice, to know that mercury may be given in general with advantage when an eruption is *scaly*—no matter whether or not it has been scaly from the commencement.

In fine, from my publications, as well as from what I have stated this night, it

is obvious, that although in the great majority of cases I consider the exhibition of mercury unnecessary or injurious, yet in one form of disease, that which produces the scaly eruption, lepra or psoriasis, it is the remedy upon which I place my sole reliance; and in other forms of venereal which produce the papular, pustular, tubercular, or rupia eruptions, there are stages and states in which it will be found a most useful auxiliary. Therefore, though it may accord with the natural indolence of our dispositions to treat all cases in either one way or the other, yet no practitioner, I aver, will be successful in following this routine mode of practice, who does not exert his powers of discrimination to ascertain to what class the symptoms under treatment belong; for no matter, in a practical point of view, whether there is one or a plurality of venereal poisons, (as I advocate,) it is of the utmost consequence, to ensure an efficient and successful issue, to consider the form of the disease under consideration, and to which of my classes it appertains.—*Prov. Mcd. Journ.*, May 21, 1845.

58. *Aneurism of the Arteria Innominata and Arch of the Aorta.* By GEORGE W. CAMPBELL, M. D., Lecturer on Surgery in M'Gill College.—(*British American Journal of Medical and Physical Sciences*, April, 1845.)—John Smith, aged 48, called on Dr. Campbell on the 22d of February last, with a pulsating tumour occupying the lower portion of the right side of the neck, of the origin of which he gave the following account:—He stated that about a fortnight previously when in the act of splitting a piece of firewood, the axe being raised at the full stretch of his arms above his head, he felt something give way in the lower part of his neck, accompanied by a sudden sensation of gasping for breath, which lasted only a few seconds; upon putting his hand upon the right side of his neck, he discovered a small tumour about the size of a marble immediately above the sterno-clavicular articulation, pulsating strongly, and so movable, that he could get his fingers round it and push it backwards and forwards under the skin. Not deeming it of any importance, he paid little attention to it, and as it gave him no inconvenience, and was unattended with pain, he was only induced to ask medical advice on account of the great rapidity of its growth.

Smith was a tall, powerfully built man, of a sanguineous temperament, had served for twenty-four years in the King's Dragoon Guards, had left the service two years previously upon the return of the regiment to England, and for some years past had been greatly addicted to the intemperate use of ardent spirits. He had complained for several years of occasional severe pain in the right shoulder and side of the neck and head, which he thought was rheumatism, but with the exception of these occasional attacks, was strong and healthy, was never absent from parade, and had no difficulty in performing his military duties, while in the service, or in attending to his work as an ostler in a livery stable, since he left it. Had no palpitation, cough, or shortness of breath. When Dr. C. first saw him, the tumour had attained the size of a large egg, was visible both upon the tracheal, and external margin of the sterno-cleido-mastoid muscle, measuring $3\frac{1}{4}$ inches in its longest diameter, which was transverse to the axis of the neck, and extending vertically above the sternum and clavicle for $2\frac{1}{2}$ inches; it could be followed into the chest, and was felt pulsating as low as the junction of the cartilage of the second rib with the sternum. The tumour was capable of being almost entirely dispersed by compression, the pulsation being equable all over its surface, apparently increasing in proportion to the pressure employed, at each impulse strongly elevating the fingers, and whenever the pressure was removed, instantly regaining its original dimensions. Upon firmly compressing the carotid artery of the right side against the transverse processes of the cervical vertebrae, the pulsation in the tumour was arrested, and it became soft and flaccid. A similar effect was produced, but not in so marked a degree, by compressing the subclavian over the first rib. The pulse was equally good at the wrist and in the branches of the carotid on either side. Upon percussing the chest, the inner portion of the right sub-clavicular region was found to sound dull, and upon the application of the stethoscope, a distinct pulsation was discovered in that situation, gradually losing its intensity as the heart was approached. This pulsation gave a strong impulse, was double, was not attended by any thrill, and only a very slight bruit de soufflet; it might be compared to a heart beating strongly at the top and to the right side of

the sternum. Neither bruit nor thrill was discoverable in the tumour above the clavicle.

The effect of a restricted diet and the exhibition of digitalis with avoidance of exercise was tried for a fortnight, at the end of which period, although the general force of the circulation was much diminished, and the man had become weak and pale, the tumour still continued to increase slowly in bulk, and its parietes became very thin. As the aneurism, if left to itself, would evidently very shortly prove fatal, and as by its extension both in an upward and outward direction, it was daily adding to the difficulty, and diminishing the prospect of success from an operation upon either of the great arterial trunks, it was resolved to give the patient the chance afforded by the operation upon the distal side of the tumour, so ably advocated by Mr. Wardrop. It was accordingly performed on the 8th of March, in the following manner:

"The patient was placed upon a table in the recumbent posture, with the head and shoulders slightly elevated, the neck extended by raising the chin, and inclining the face towards the opposite side. An incision about three inches long was made through the skin and superficial fascia, along the anterior border of the sterno-mastoid muscle, extending from a little below the angle of the jaw, to the superior boundary of the tumour, which was upon a level with the cricoid cartilage; the platysma and deep fascia were divided to the same extent upon the director, the sterno-mastoid and omo-hyoïd, which were now distinctly brought into view, were respectively drawn outwards and inwards, by broad retractors, and a little further division of the cellular tissue by a silver fruit knife, and the finger nail, exposed the sheath of the vessels. Owing to the muscularity of the neck the artery lay at a considerable depth from the surface; the integuments being borne off the sheath of the vessels by the strong contraction of the mastoid muscle, a very large vein was seen crossing the artery, apparently coming from the thyroid body, and passing obliquely outwards and downwards to empty itself into the deep jugular; the vein being drawn upwards, and the sheath being opened, an aneurismal needle, armed with a well waxed single silk ligature, was passed round the artery; the vagus nerve was seen external to the artery, but the deep jugular vein did not come into view. The artery was raised a little from its sheath upon the ligature, to ascertain the condition of its coats, which were found very sound and healthy; the ligature was then gradually tightened and firmly secured by a common double knot, one end of it being afterwards cut off. Immediately upon tightening the ligature, the aneurismal swelling completely disappeared, and no trace of it could be discovered for several minutes; after a short time, however, it began gradually to return, but it did not nearly regain its original size, measuring only 2 inches in the transverse diameter, and rising little more than an inch above the sternum; the pulsation was by no means so strong, and it was much softer, and more compressible than formerly. The pulse before the operation was 96; during the operation it sank to 88, and became very small; immediately afterwards it again rose to 96; little or no blood was lost. Immediately upon tightening the ligature, the patient complained of severe pain in the side of the head, the pupil of the opposite eye became slightly dilated, he felt for a few moments bewildered and confused, and could with difficulty be induced to remain quiet. The wound in the integuments was brought together by the interrupted suture, a compress and bandage were applied over the aneurism, and the patient was put to bed with his head and shoulders elevated. The liniment. sapon. c. opio. was ordered to be applied hot, to the side of his head, where he complained of the pain; the digitalis was to be continued, and the diet was restricted to toast and gruel in small quantities."

For the first two days the patient was very much troubled with a teasing cough, which was somewhat allayed by opiates. On the 11th of March primary union had taken place in lower half of incision, upper half discharging slightly and looking healthy. Tumour diminished to the size of a walnut, very compressible, and pulsating by no means strongly. Pulsation still heard distinctly at upper part of sternum, without bruit and double as formerly. Cough not so troublesome. The compress was re-applied. The case made satisfactory progress from this to the 23d of March, at which date the wound had nearly cicatrized—ligature was still firm—tumour quite flat, and can only be discovered by a slight pulsation, which

still exists at inferior and internal part of its former situation. Pulse returned to temporal artery on right side—pupil of left eye still slightly dilated—pulsation at upper part of sternum much diminished in impulse—functions all natural. The compress upon the tumour was discontinued, and the digitalis and restricted diet persevered in.

The following night the patient sat up by the stove for a considerable time without any other covering than his night shirt; this exposure was followed by a rigor, succeeded by high fever, and Dr. C. found him on his visit, March 23, slightly delirious, complaining much, with hurried respiration; heart's action very tumultuous and strong. By depletion, opiates, &c., he was relieved. March 24, upon examining the chest, the dull sound on percussion was found to extend over a much greater portion of the right sub-clavicular region than formerly, and a pulsating tumour could be felt with the fingers extending from the cartilage of the third rib to the clavicle. Upon applying the stethoscope, no bruit was discoverable, but impulse was very strong and sound double—a loud bronchial rhonchus was heard upon the right side during inspiration; the point at which it was most distinctly heard, was posteriorly, internal to the scapula; it was at the time attributed to compression of the right branch of the trachea by the aneurism—no return of tumour in the neck.

March 27.—Dr. C. was sent for to his patient at 2 o'clock, A. M., and found him sitting up in bed suffering from great dyspnoea—countenance of a livid colour—pulse 150 very small—heart's action exceedingly tumultuous—left pupil largely dilated—two pulsating tumours were felt rising up upon both sides of the sternum, the larger one upon the right side, in the situation of the original aneurism, these tumours were not well defined, as the whole neck was swollen and of a livid colour from venous engorgement. The distressing sense of suffocation gradually increased, and he expired at five o'clock, P. M., of the same day. He was perfectly sensible to the last and knew that he was dying from the first seizure.

Post-mortem examination 15 hours after death.—The surface of upper part of chest, neck, and face, presented a livid appearance from venous engorgement. Upon opening the thorax a large tumour was discovered, resembling very much, in size and appearance, the heart enclosed in the pericardium, occupying the superior portion of the right side of the chest, and extending towards the left side, half an inch beyond the centre of the first bone of the sternum. The tumour filled up the whole of the anterior and middle mediastinum, above and in front of the root of the right lung, extending from the cartilage of the third rib to the top of the sternum. The tumour was removed from the body along with the heart and great vessels within the thorax; the upper part of the sternum, with the inner half of the clavicle, and the 1st, 2d, and 3d ribs attached to it; the trachea, œsophagus, anterior muscles, great vessels, and nerves of the neck, were also removed, as far up as above the os hyoides, and the whole was subsequently carefully dissected. The left ventricle of the heart was found slightly hypertrophied, the aortic valves were free from disease, the ascending aorta was greatly dilated, and numerous scales of bone were found deposited in, and under its lining membrane. The aneurismal swelling commenced at the root of the arteria innominata, involving the whole of the anterior parietes of that vessel, to within a quarter of an inch of its bifurcation, and the transverse portion of the arch of the aorta, as far as the giving off of the left carotid, the origin of which was slightly dilated. The first bone of the sternum, the sternal ends of the clavicle and first rib, were denuded of periosteum, and formed part of the anterior wall of the aneurismal sac, the first bone of the sternum being deeply hollowed out by the pressure of the contained blood. From the superior part of the large tumour, the remains of two smaller aneurisms were found arising; the posterior one, the larger, extended into the neck, upwards, and towards the right side, for at least a couple of inches above the clavicle; its sac in front was composed of the deep cervical fascia, and external and internal to the mastoid muscle, was exceedingly thin and weak. The sac of the anterior aneurism was capable of containing a small walnut; it arose from the large sac about the centre of the sternum, by a distinct opening, immediately in front of that into the posterior aneurism; the sacs of both these aneurisms were found empty and collapsed. The interior of the large aneurism was almost completely filled by a large coagulum, weighing eight ounces and a quar-

ter avoirdupois, very dense in structure, not deep in colour, formed of distinct lamellæ, and in many places slightly adherent to the parietes of the sac. A loose coagulum of blood, very different in appearance and structure from the fibrinous mass occupying the interior of the aneurism, was found in the ascending aorta. The descending aorta was dilated as far as the diaphragm, and contained ossific deposits in its interior. The right carotid was found nearly divided by ulcerative absorption, produced by the ligature, half an inch below its division; the vessel was plugged up by a firm coagulum, for upwards of two inches below the ligature, the superior part was also filled up in a similar manner as far as its bifurcation. The superior part of the right lung was found condensed in its substance, from the pressure of the tumour. The left lung was congested throughout, and posteriorly and inferiorly was found in the first stage of pneumonia. The liver was larger and harder than natural, the other abdominal viscera were healthy. The brain was found quite healthy, and the branches of the internal carotids seemed equally large on both sides."

The above case, Dr. C. remarks, is instructive in several particulars. It proves first, what a great amount of aneurismal disease may exist for a long period, (as evidently must have been the case in this instance from the deep erosion of the sternum,) without any severe local or constitutional disturbance. It proves secondly, how much compression of the carotid can affect the circulation in an aneurism of the innominata, even involving the arch of the aorta; upon the application of the ligature, the tumour for the time entirely disappeared, and never again regained any thing like its original bulk. I have little doubt also, says Dr. C., that the production of the fibrinous coagulum, found in the interior of the larger aneurism, was subsequent to, and in a great measure produced by, the obstruction in its circulation caused by the ligature of the carotid. The mere bulk of this unyielding mass, from its pressure upon important organs, conjoined with the febrile paroxysm brought on by the man's own imprudence, may have had a considerable share in bringing about the fatal result.

59. *New Fracture of the Humerus.*—Dr. HOUSTON laid before the pathological Society of Dublin some examples of a peculiar lesion of bone, which, he stated, had never been appreciated in its true light by the profession until demonstrated at that society by Mr. Smith; he meant that lesion of the anatomical neck of the humerus to which the term impacted fracture may be properly applied. He had three specimens for exhibition. The great interest attached to the observation of this accident was the establishment of an analogy between it and a similar one, which also had been first noticed in that city by Dr. Colles, in connection with the femur, and called impacted fracture of the neck of the femur. Sir Astley Cooper, in a paper in the Guy's Hospital Reports, on fractures of the neck of the humerus, had described and even delineated this accident, but without taking any notice of the remarkable impaction to which the bones were subjected. An important practical observation made by Dr. Houston was, that in all his cases there had been complete and firm reunion of the fragments, by bone, and that, too, with only a trifling degree of deformity. With regard to the diagnosis of this injury, Sir A. Cooper, in the memoir above alluded to, says that the lower fragment gets forward, so as to admit of being pressed and felt under the pectoral muscle, and lays this down as one of the most characteristic symptoms of the injury. Dr. Houston showed that, in his cases, and also in the drawings published by Sir A. Cooper and Mr. Smith, in which the fracture ran through the anatomical neck of the humerus, close to the articulating surfaces, the displacement of the lower fragment was more outwards than inwards, the impaction being of such a nature that the inner edge of the shaft was driven into the centre of the spongy part of the head; or, in other words, that the detached head was twisted half round, so as to be placed somewhat on the inside of the shaft; a position which the bones had manifestly taken and maintained from the first moment of the accident, and which rendered it physically impossible that the lower fragment could ever have been felt in the position which it has been said by Sir A. Cooper to assume, under the pectoral muscle. In all the cases of the kind of fracture known to Dr. H., the angle formed at the point of the lesion was salient outwards, viz., at the great tuberosity; and this was shown by him to contrast strongly with the deformity in

a specimen in which the fracture had occurred in the surgical neck of the humerus, or close below the tuberosities, as here the lower fragment projected to the inside of, and beyond the upper, in such a manner that it might have admitted readily of being pushed, when recent, in the direction of the axilla and pectoral muscles, and of being felt there.—*Dublin Hospital Gazette*, April 1, 1845.

OPHTHALMOLOGY.

60. *On the Treatment of Inversion of the Eyelids.* By Professor GERDY.—Notwithstanding the many operations proposed for the relief of trichiasis, and ectropion, the practitioner often finds himself embarrassed in the cure both of trichiasis, whether partial or complete, and of inversion of the margin of the eyelid. This difficulty has for many years attracted the attention of Professor Gerdy, who has just published in the *Journal de Chirurgie*, an interesting essay on this important subject.

Eight or ten years ago, M. Gerdy was consulted by a patient who had tried various means for the relief of a most distressing trichiasis. The skin of the upper lid had been several times excised in a line parallel with the length of the organ; M. Gerdy himself had excised it with as little success as those who had attended the patient previously. He then conceived the idea that it might answer the purpose to remove the whole margin of the upper lid, carrying the excision beyond the bulbs of the eyelashes. He examined how far these bulbs extended, in order that he need not expose himself to the liability, on the one hand, of removing them but imperfectly, nor, on the other, of excising too large a part of the upper lid, thus leaving the eye exposed. He ascertained that it was only necessary to remove a strip of four millimetres in width, at most, along the free margin of the upper eyelid, and of three millimetres along that of the lower, if it were also affected. Considering the condition of the lid of his patient, the long duration of the affection, his continual sufferings, and the strong desire he felt to be cured, M. Gerdy decided upon operating, and had reason to congratulate himself upon it. Since that period, other cases have been operated on with success; but the following case will exhibit more satisfactorily the value of this proceeding, which, however, the author does not resort to excepting when it would seem that the excision of the skin of the lid would not answer, or has already failed.

A farmer of Saint-Owen, 42 years of age, entered La Charité on the 8th Feb. This individual had been in the hospital four years before. He had then, two or three lines outside of the external angle of the left eye, a small ulcerated tumour consisting with an inversion of the eyelashes of both lids. The tumour was removed, and the edge of both lids was excised to an extent which included the ciliary bulbs. This resection had the desired effect; the edges of the lids cicatrized and remained deprived of the lashes; the eye was still sufficiently protected; there was no lachrymation; in short, in this respect, the condition of the patient was all that could be desired. But the tumour which was removed at the same time, and which was a *noli me tangere*, was reproduced in both eyelids and demanded the entire removal of the superior, and also a portion of the lower lid. This operation was performed on the 8th April, 1844. M. Gerdy divided the external commissure of the lids, and then circumscribed the tumour by a semi-circular incision of which the concavity was downwards, commencing at three millimetres from the internal angle, beyond the superior lachrymal duct, and ending at the external angle. The operator removed all that was included in this incision, excepting a small portion of the mucous membrane which he reserved towards the external angle for the purpose of covering the edge of the upper lid at the point which should correspond with the external commissure of the lids, and of preventing adhesion of the lids within this point. The partial excision of the lower lid presented nothing peculiar in the mode of operating.

This being done, M. Gerdy, in order to satisfy himself as to the necessity of replacing the upper lid by a new one, directed the patient to shut the eye, which was effected completely by the contraction of the eyebrows. This fact rendering

the utility of the intended blepharoplastie operation doubtful, the patient was spared the pain of it.

During the first few days succeeding the operation, pledgets saturated with cold water were carefully applied to the eye. After some days the wound commenced suppurating. Granulations sprouted up on the edges of the mucous membrane and of the skin; they were repressed with nitrate of silver, and gradually formed a thin, uniform, shining and firm cicatrix, which constituted the margin of the lid. After the 20th April, the result of the operation was appreciable. At first sight, there was but little difference in appearance between the eyes: the left eye was completely closed by a slightly forced contraction which had the effect of drawing down the eyebrow and subjacent skin. If the contraction was but slight, the eyelids were not brought perfectly in contact with each other; they remained separated at one point by an interval of about two millimetres. The transparent cornea, however, was protected by a spontaneous upward motion of the eyeball, so that the sclerotic alone was visible in the interstice of the lids. It must be also noted that the patient had no lachrymation.

Thus, we see, that the most obstinate and complete version of the lids may be overcome by the excision of their entire ciliary margin, without inducing permanent exposure of the globe of the eye, or great deformity, or serious inconvenience, to the patient; that this mode should be resorted to when the removal of the skin has failed, and when a trichiasis occupies the greater part of the palpebral margin.

It is proved, also, that the entire superior lid and a portion of the inferior may be removed or destroyed without its being rendered necessary to replace them by new lids, by means of the painful operation of blepharoplasty; that nature, properly assisted, can cure the patient without the eye remaining exposed to the air and light, without any epiphora existing, notwithstanding that the free orifices of the lachrymal ducts have been very much modified, or perhaps entirely destroyed.

Such are the inferences which M. Gerdy draws from the preceding facts. We quote, in conclusion, a passage from the essay in which the author, with the sarcasm which distinguishes him, expresses his opinion with regard to the restoration of the eyelids, and autoplastic operations generally.

"The case of Daunay," says he, (the one which we have just quoted,) "is important not only for the practical knowledge which it furnishes as to the radical cure of trichiasis; it is interesting to the surgeon in another respect. It shows that we should not despair of the power of nature even in the most severe lesions of the eyelids, and that we ought not lightly to decide upon carving out from the forehead, the temple, or the cheek, a miserable flap of skin to usurp the noblest region of the face. The eyelids are so slight and delicate in their organization, their functions so well adjusted and so beautiful; they are so flexible, susceptible of such motion, and so rapid in their movements; they play so prominent a part in expression, from the manner in which they conceal or expose the eyes, that it is difficult to replace them with any advantage by a flap taken from a neighbouring part. The thing which is thus produced cannot be called an eyelid, it is a something unpleasant in appearance, and for which there is no name; it changes entirely the expression of the face, interferes with the vision of the patient, offends the eyes of all who see it, and looks more like a shapeless, ugly plaster than an eyelid formed to beautify, to protect the eye and to assist it in the performance of its functions.

"Assuredly, if we considered only the deformity, the imperfection, and the defects of these so-called eyelids, which, from a sort of paternal weakness, we exhibit with so much pride, when we ourselves have been the architect of them; if, above all, we reflected upon the sufferings which these miserable eyelids cost, we should for ever banish blepharoplasty as well as rhinoplasty from operative surgery. But we would not, in the case of a part of less consequence, reject and proscribe the whole class of plastic operations. If, in the sort of patch-work which autoplasty makes, whether well or ill, by dint of needles and pins and waxed or unwaxed threads, blepharoplasty is more nearly allied to a tailor's than a surgeon's work; if it resemble it still more closely, in some instances, from the variety in colour of the parts brought together, and which reminds one involuntarily of the

contrast produced by patching a piece of new cloth upon a worn out garment, whose poverty it conceals and glosses over; if it lower in some degree our art, it is in a few cases really useful, and must not be discarded."—*Journal de Médecine et de Chirurgie Pratique*, Oct., 1844.

61. *Motions of the Iris.*—M. MAUNOIR,* of Geneva, to support the view which he has so long maintained of the existence of the sphincter muscle around the pupil, and the radiated muscle in the rest of the iris, states that galvanism excites contraction of both these muscles, and that in a recent case of accident he had an opportunity of observing their antagonist action. A man received a small penetrating wound through the lower part of the cornea, and a point just higher up in the iris. When the cornea healed, a triangular false pupil was found at the wound of the iris. Both this and the natural pupil could contract and dilate; but, on the contact of light, the false pupil dilated and enlarged when the natural one contracted, and the false pupil contracted when, in the absence of light, the natural one was dilated. [The result of a number of observations in cases of artificial pupil, wounds of the iris, &c., by E. H. Weber,† went to prove, that the movements which occurred could not be explained by supposing that the iris has circular or radiated fibres, or both, but only by believing that its irritable part consists of fibres variously woven together without any definite direction.]

A good discussion of this subject has been published by Dr. C. R. Hall.‡ He considers that the iris has a circular muscle for the contraction of the pupil; that the dilatation of the pupil depends, probably, on the cellular tissue or the blood-vessels of the iris having an unusual vital contractility; and that the only effect of the elasticity of the tissues of the iris is to accommodate it to changes of size, and to restore it from extremes to a medium state—*i. e.*, to the size which it usually has after death.—PAGET's *Report*, in *Brit. and For. Med. Rev.*, April, 1845.

62. *Regeneration of the Crystalline Lens.*—VALENTIN§ has found, in two rabbits, that four months after the extraction of the lens, a new body has been produced smaller than it, yet presenting, to microscopic examination, the peculiar cells and fibres of the natural lens in stages of development similar to those through which they naturally pass. These were mixed, however, with minute granules; their arrangement was not quite regular in all parts; and in both cases there was at the lower part of the new lens, opposite the injured part of the capsule, a yellow turbid portion, formed of a finely granular substance quite different from lens-substance. In both cases the capsule of the lens was transparent, without any trace of blood-vessels. The appearances indicated that the new lens was formed from cytoplasmous substance oozing into the emptied capsule, and that thus its harder central parts were those which had been longest engaged in development, and were most perfect. Ernst Brücke|| has pointed out an ingenious mode of demonstrating the structure of the vitreous humour, derived from the fact that when two solutions which will precipitate each other, permeate, or are imbibed in membranous septa, the precipitate first forms in and upon the membrane. By placing the vitreous humour of an eye cut vertically and transversely behind the lens in a concentrated solution of acetate of lead, he found its surface soon covered with a white substance, and when, some hours after, a portion was cut off from the posterior part, the section was seen marked by fine milk-white streaks, which were edges of layers of which the outermost lay parallel to the retina, the innermost parallel to the posterior surface of the lens. The distances

* Report from the Académie des Sciences, 19 Fevr., 1844; in the *Gazette Médicale*, 24 Fevr.

† Hildebrandt's *Anatomie*, bd. iv. p. 80.

‡ Edinb. Med. and Surg. Journal, July, 1844.

§ Oesterreische Medic. Wochenschrift, Fevr. 10, 1844; from Henle and Pfeuffer's *Zeitschrift*, 1843, bd. i. heft. ii.

|| Müller's *Archiv.*, 1843, heft. iv. p. 344. Pappenheim (*Specielle Gewebelehre des Auges*, 1842, p. 182), said that the vitreous humour, when treated by carbonate of potass, "may be stripped in concentric layers almost like a bulb;" but did not demonstrate any of these layers of membrane.

between the streaks were greatest in the axis of the eye, and became less towards the zonula, where they were about $\frac{1}{16}$ of an inch apart. The margin of the layer appeared to be connected with the hyaloid membrane near the zonula, but in what way could not be determined. The vitreous bodies thus treated with lead separate more easily in the direction of the layers than in any other.—*Ibid.*

63. *Amaurosis from Fungoid Tumours of the Cerebellum.*—Mr. SIMONS communicated the following interesting example of this to the Birmington Pathological Society. A porter, aged 25, of rather full habit of body, about two years back, was taken with pain and giddiness; this was repeated two or three times, for which he was bled, purged, &c.; his eyesight now began to fail him, and pain in the head continued. Occasionally, upon going home at night, he could not see his way for some time. He then applied to the Eye Infirmary, where he underwent a course of treatment, but gradually got worse, and became completely amaurotic. At this time he was admitted into the General Hospital, and continued there without any improvement for about six weeks. “He now came under my care, when he principally complained of pain in the back of his head; the eyes were bright, quite insensible to light; he was very morose and dull in disposition, but was easily excited, and became very passionate; had no inclination whatever to occupy himself in the manner that persons in his unfortunate situation do, but preferred sitting in the corner from day to day. There was slight imperfection in walking.

“He went on in this way without any material alteration until about four months before his death; when one morning I called, and observed the right eye very much inflamed, and the cornea ulcerated; there was no discharge; no sensibility to light; and so little pain, that neither he nor his friends were aware of it. By treatment the eye quite recovered its wonted clearness. His bowels now began to be very costive, and we had great difficulty in keeping them open; he also had great difficulty in voiding his urine.

“His health now began to give way; his appetite failed him, and he complained of most violent pain in the occiput; always obliged to sit in the stooping position, or resting his forehead on the table. For about two months before his death, even this position was not sufficient to give him ease, but the lower he could bend his head the easier he felt, so that for two months preceding his death he used to sit on a chair by the table, with his head bent below the level of the table, and in this position take his meals, which he would reach off the table with his hand, and convey to his mouth in this crouching position. He died on the morning of the 21st of January, without any aggravation of his symptoms.

Sectio Cadaveris, forty hours after death.—“The membranes of the brain healthy, the substance quite firm, the left ventricle contained fully half a pint of clear colourless fluid, the right about four ounces; the substance of the brain was so firm that the finger was moved about in the ventricles freely, without injuring the septum lucidum; corpora striata and optic thalami, healthy; most of the base presented a degree of softening, the more decided by comparison with the consistency of the remainder of the brain; this condition affected more particularly the surface of the crura. The pons and medulla oblongata had quite lost their consistency.

“The cerebellum was very large. It contained a fungus as large as an orange, which occupied the left and a part of the right lobe. It grew from the back part of the organ, where it was attached by an extensive base, and projected into a cavity within the cerebellum, occupying the place of the natural nervous tissue. The remaining substance of the organ, which enclosed this cavity in front and on the left side, was about half an inch thick, and quite healthy. The inner surface of the cavity, and the surface of the fungus, were thickly coated with a matter, which had much the appearance of inspissated mucus, though rather less tenacious. The texture of the fungus was somewhat softer than the natural condition of brain; it seemed to be composed of altered cerebral substance.—*Prov. Med. and Surg. Journ.*, April 30, 1845.

64. *Iritis in Infancy.* By JOHN WALKER, Esq., Surgeon to the Manchester Eye Hospital.—(*Prov. Med. & Surg. Journ.*, May 7, 1845.) Iritis, in infants, is probably, in most cases, owing to a syphilitic taint derived from the mother, either

before birth or during suckling, but Mr. WALKER very justly remarks that there is no reason why the first named disease should not occur independently of such cause in infants as it does in adults, and it must not be assumed therefore to be always necessarily of syphilitic origin. "The symptoms of the disease in question, are," Mr. Walker remarks, "very different from those of the ordinary ophthalmia of infants. The conjunctiva is but slightly affected, so that there is rarely any mucous or purulent secretion observed. The sclerotic coat is generally inflamed, and hence the deep-seated and pink-coloured vessels are often numerous, and there is usually considerable intolerance of light and lachrymation. But it is principally in the iris and capsule of the lens that the more striking and characteristic symptoms are noticed: thus the colour of the iris is usually changed, its brilliancy is materially impaired, and its movements are sluggish, if not actually suspended, the pupil being usually much contracted, and sometimes of a very irregular shape. The morbid action rapidly extends to the capsule of the lens, as indicated first by a muddiness in the pupil, and subsequently by a deposit of lymph, which soon becomes organized, and is permanently adherent to the texture of the capsule."

The danger to vision in these cases will depend upon the amount of opacity of the capsule, or of the contraction of the pupil. If either of these conditions is extensive, and likely to be permanent, then an unfavourable, or at least a guarded, prognosis should be given.

In the treatment of this variety of ophthalmia, we must rely chiefly on internal remedies, and such as affect the system at large. In most cases it will be useful to apply leeches to the palpebrae in such numbers as are suitable to the age and constitution of the child. Purgatives, and in some cases even nauseants, should be freely administered in the first instance; but these must not be allowed to supersede the employment of mercury. Small doses of calomel, or of the hydrargyrum cum creta, should be administered without delay, and continued until the progress of the disease has been arrested, or the system has been brought under the influence of this powerful agent. Belladonna should also be applied freely around the orbital region, so as, if possible, to keep the pupil in a state of expansion. In some instances an evaporating lotion may be usefully prescribed in the more acute stage of the disease, but the belladonna must be regarded as the paramount local remedy.

65. *Remarks on the Pathology of Iritis.* By J. F. FRANCE, Assistant Surgeon to the Eye Infirmary.—(*Guy's Hospital Reports*, Oct., 1844.) The main object of this paper is to show that arthritic and syphilitic arthritis should be considered as distinct forms of disease, and to point out the peculiar habitudes of each. Simple iritis, the author conceives to be very rare as a primary affection, independently of wound, injury, or disturbance.

The early and middle periods of manhood are the ages most liable to syphilitic iritis, whilst arthritic iritis is most frequently met with in elderly people. In both, the feeble and cachectic are those who chiefly suffer, at least among the applicants in hospital practice.

"In well marked cases of syphilitic iritis," Mr. France states, "the first morbid changes in the membrane itself are commonly observed at or close to the margin of the pupil, where the iris is found not only to have its mobility impaired and its brilliancy tarnished, but the sharpness of that margin lost; and as the disease advances, the natural colour of the iris, at one or more inflamed points, which appear thickened, is seen to give place to the development of a dusky reddish-brown hue (frequently described by the terms foxy or cinnamon-colour), which has been correctly deemed an almost absolute gnomon of syphilis.* This colour, as the disease progresses and the tumefaction becomes greater, is usually rendered still more striking; but it sometimes is obscured, to a certain extent, by fibrin effused into the cavity of the anterior chamber, which presents the ordinary light-

* It is a curious fact, that a similar tinge of reddish brown (copper colour) characterizes syphilitic cutaneous eruptions. More truth is conveyed than was ever intended in the remark—

Heu! Quam difficile est crimen non prodere vultu!

yellow colour of similar effusions elsewhere, or, in very acute cases, may be discoloured by admixture of red particles of blood, and remotely stimulate the reddish swelling of the iris just spoken of. So great participation of the aqueous membrane is, however, far from common in syphilitic iritis, in which, generally, exudation takes place from the free surface of that membrane only in sufficient quantity to attach parts of the edge of the pupil to the capsule of the lens, and perhaps cover, more or less, its contracted aperture. Very often, indeed, attachment of the edge of the pupil to the anterior capsule, at the situation of the most inflamed portions of the iris, is the only evidence of any morbid effusion whatever upon the free surface of the membrane of the aqueous humour; and the changes just described in the aspect of the iris itself are most frequently left open to view."

There is another appearance which is far from constant, but, whenever it is detected Mr. France thinks the syphilitic origin of the disease may be confidently asserted; this is "the occurrence of very minute dark-brown specks in the lower segment of the substance of the cornea: they appear circular in form, with well-defined margins, and their production seems independent of any general haziness or inflammation of the corneal structure; these characters mark them as quite distinct from those mottlings described by Mr. Wardrop as a consequence of aquo-capsulitis."

The ordinary aspect of the iris, under arthritic inflammation is, according to Mr. France, as follows:—

"Here, dullness of the anterior chamber is much more extensive and considerable; and if the disease be not quickly checked, the entire circle of pupillary margin is soon fixed by lymph, to the capsule of the lens; and even the whole area of the pupil may be thickly overspread with this effusion, which presents very generally a white or yellowish-white colour. The surface of the iris too will be found not *partially* discoloured in rusty-looking spots, but uniform in its alteration to a greenish or yellowish hue; a circumstance of considerable import, as contrasting with syphilitic discoloration: and lastly, whatever tumefaction of the iris there may be, and it is usually very slight, will be observed to partake of the same character, not being confined to a spot here and there, but general. The fact is, that in the immense majority of cases of arthritic iritis, the lining of the anterior chamber and serous covering of the iris are, in common with the sclerotic, the principal seat of the disease; and it is remarkable how closely herein it tallies with the recognized disposition of rheumatic inflammation in other regions to affect free membranous surfaces (as those of the synovial cavities and pericardium), and then give rise to abundant effusion, which is unknown as an accompaniment of rheumatism of fibrous and muscular tissue. Thus the large participation of the aqueous membrane in the inflammation called arthritic iritis, is manifested by copious effusion into its cavity, generally fibrinous, but sometimes serous; while the affection of the muscular structure is inferred only from its proximity, the contracted pupil, aching pain, and especially the exacerbation of that pain occasionally produced by the application of belladonna. Now, it is to the circumstance that syphilitic iritis, on the contrary, is, for the most part, essentially an inflammation of the parenchymatous structure, that the disease owes its peculiar character of producing tumefaction or thickening; and, in proportion as it departs from this type are the chief marks deemed diagnostic either ill-developed or absent. The tuberculation of the membrane, and its cinnamon discoloration, (which are merely the ordinary 'notæ inflammationis tumour et rubor' of Celsus, modified by texture and specific action,) are owing to this, and yet are commonly accounted for in just the opposite way; for the tubercles are generally regarded as attachments of lymph to the free surface of the iris, and their colour is ascribed to admixture of some extravasated red particles, or (as by Mr. Lawrence, who yet seems, with Beer, to recognize distinctly the interstitial origin of the tubercles), to the combination of the colour of lymph with that natural to the iris. Of these two suppositions, the former is certainly the more tenable; for a combination of the faint straw-colour of lymph with gray, blue, hazel, or brown, can never yield a tinge of red—one of the three primitive colours.

"When, however, a normal case of syphilitic iritis is examined closely in the earliest stage, it is clear to demonstration, that the irregularities of the surface of the iris are due to its proper substance being, at certain parts, swollen and infil-

trated, because the surface, though irregular in level, is continuous, and the confines of the swellings are lost insensibly in the surrounding comparatively healthy part: and if the case be attentively watched as the disease advances, it may, for a considerable time, remain equally evident that any morbid deposit there may be is interstitial. The tumefaction at one or more of these points, however, sometimes greatly increases, generally less in superficial area than in elevation; and though at first it barely rises above the surrounding level, it may eventually proceed to such extent, owing to the loose and distensible texture of the iris, as to constitute a tubercle, projecting high above the general plane, and sometimes even overlapping its own base. In the latter event, as also when a film of fibrin is effused over the surface of the tubercle, from sympathetic inflammation of the aqueous membrane (an occasional but not common circumstance), the real origin of the tubercle may be for a time obscured; yet, as it subsides at length, and the free lymph is absorbed, the natural reticular appearance of the anterior surface of the iris again comes into view, and the roots of the tubercle (so to speak) are seen to lie beneath that surface."

Eighteen cases are related in illustration of the various points which the author desires to establish.

With regard to the treatment Mr. France observes: "A more or less antiphlogistic course is naturally suggested as the cure for so decidedly an inflammatory disease as syphilitic iritis; experience, however, proves that the more powerful antiphlogistic means—venesection—is but very sparingly demanded; so seldom, indeed, that I do not remember an instance of its being resorted to at Guy's for this complaint. Perhaps in country districts this mode of depletion may be found necessary in full plethoric habits. The same mould of constitutional frame may demand it in metropolitan practice; but I much question whether, at the present time, our rural and civic labouring population really require that difference in the rigour of remedial measures which was formerly inculcated. I have, at least, no hesitation in deprecating that free resort to venesection, 'whenever there is feverishness' (whether the pulse be full and strong, or no) which has been recommended in this disease;—first, as needless for its cure; but, above all, as tending to produce or aggravate that irritable cachectic state, to which the syphilitic subject is especially prone. * * *

"Local depletion by cupping is, however, a remedy of the greatest service; it gives often immediate relief to the patient, at once mitigates his pain, and dissipates, in some degree, his obscurity of vision. Coupled with a brisk purgative, to clear the intestinal canal, it forms a nearly constant preliminary to the commencement of a mercurial course sufficiently decided to affect the mouth, or make the disease recede; and the practitioner may, of course, be well content if this latter should be even the only evidence of mercurial action upon the system. For mercury must not be administered in a set dose: it should in many cases be introduced into the system in the mildest form; while, on the other hand, in a more favourable constitution it may be exhibited with comparative freedom.

"The cases are numerous, in which the patient may be advantageously supported under, and shielded as it were, in a measure, from the injurious effects of the use of mercury, by the simultaneous employment of sarsaparilla, with or without the iodide of potassium—a combination no less valuable in this form of syphilitic disease, than in others where an irritable and vitiated constitution forbids the enforcement of so energetic a system of treatment as the local disease appears to demand. It is, in short, of infinite use when this malady arises in a cachectic individual; and it enables us then, if necessary, to diminish our dose of mercurial, and yet, retain good hope of effectually reducing the disease, and discharging the patient with improved health and preserved sight. The mercurial may be advantageously given in form of pill with the extract of hyoscyamus, which possesses this claim of preference to opium—that, in place of favouring a disposition to contracted pupil, which is one of the ordinary concomitants of the disease, it aids the belladonna externally applied in counteracting that morbid tendency. Chalk may, at the same time, be administered, to prevent any purging effect of mercury, which hyoscyamus is not equally calculated with opium to restrain.

"Conium, it is asserted, does not possess the power of causing dilatation of pupil in common with belladonna, hyoscyamus, stramonium, &c.; yet, in one case of

syphilitic iritis, in which the nurse had, by mistake, omitted the application of belladonna, I observed extreme dilatation follow its use in full doses combined with mercury; and I could not satisfactorily account for this phenomenon, except by ascribing it to the action of the hemlock.

"When the acuteness of the inflammation has been subdued, and the disease is quickly yielding, the dose of mercury at first requisite should be diminished. Small doses are, however, often needful for a long time after the disappearance of every external mark of inflammation, in order to remedy some slight visual defect—as a musca—which may continue to give annoyance to the patient. Its exhibition in this mild form is perfectly compatible with the administration of tonics and permission of a moderate diet, when deemed desirable.

"Blisters become available as soon as ever further local depletion by cupping is judged unnecessary; and inunction of blue and opium ointment to the temple and forehead, when pain about those regions is severe, very often produces the greatest relief.

"The oil of turpentine is certainly capable of exercising a controlling power over syphilitic iritis, more especially, according to Mr. Carmichael, who first recommended it, when the aqueous membrane is chiefly, or, at least, largely involved;—a set of cases, however, it must be recollectcd, which, in that very particular, depart from the normal type of the syphilitic disease." Mr. F. relates a case which "at once exhibits the beneficial action of the medicine upon the local malady, and the difficulty of preventing its unpleasant, and, if continued, injurious effects upon the kidney, which would probably entail more serious mischief upon the constitution, especially, if previously unhealthy, than the administration of mercury in full doses for three or four days, and its repetition, in alterative doses, combined with tonics subsequently. In one other case, where turpentine was employed under my observation for this disease, it was likewise necessary to discontinue it, in consequence of the disturbance it excited in the system; Mr. Carmichael, however, succeeded in warding off these morbid effects, and deriving the expected advantages from it.

"Differing in habit and character as syphilitic iritis does from arthritic, it is not surprising that they stand apart also as respects treatment. Less vigorous measures altogether are called for in the latter disease. Cupping is, indeed, generally necessary, but only to small extent. Mercury need not be given to affect the system; but as an alterative, or accompanied with saline purgatives and colchicum, to cause free action upon the bowels, it is, in the active stage, and to persons of moderate power, advantageous; while an early resort should be had to tonics with alkalies, the alterative dose of mercury being continued. Arthritic iritis is remarkable in its sensibility to the actions of belladonna and conium,—a peculiarity, I believe, first observed by Mr. Morgan. The application of the first is occasionally followed by so much suffering in the globe of the eye, mitigated on omitting, and renewed on reverting to the application, as to necessitate its discontinuance;—a circumstance before alluded to, and apparently depending upon the tension produced in the muscular fibres of the iris, which, in all probability, partake in some measure of the general rheumatic affection; for such effect of the use of belladonna appears to be confined to arthritic cases. Arthritic inflammation of the conjunctiva and cornea, as well as of the sclerotic, aqueous membrane, and iris, is sometimes remarkably under the influence of the extract of conium, given in doses of five or ten grains thrice daily, so that very serious inflammation of this kind will sometimes subside rapidly under its use; and it has, therefore, obtained with us a place among the remedies recognized as most eligible in this disease."

MIDWIFERY.

66. *On the Expulsion and Extraction of the Placenta before the Child, in Placental Presentations.* By J. Y. SIMPSON, Professor of Midwifery in the University of Edinburgh.—(*Prov. Med. & Surg. Journ.*, Feb. 5, 1845.) Professor SIMPSON believes that the data he has collected, now consisting of 135 cases, are ample enough to show—

1st. That the *complete* separation and removal of the placenta before the child is very seldom followed by any great hemorrhage.

2d. That, on the other hand, the previously existing hemorrhage almost always ceases from the moment the placenta is *perfectly* and *completely* detached from its connections with the uterus.

3d. That the cessation of the hemorrhage is explicable, not on the idea that the descending head of the child acts as a plug or compress upon the exposed orifices of the uterine sinuses, but on the mutual vascular economy of the uterus and placenta, and the circumstance that the hemorrhage principally comes from the partially detached surface of the latter.

4th. That the placenta may be, and ought to be, detached from its connections with the uterus in some varieties of unavoidable hemorrhage, and that these varieties are, for the most part exactly those in which our present recognized methods of treatment are most inapplicable and most unsuccessful.

5th. That under such circumstances the practice would, in all probability, be attended with much saving of maternal life.

6th. That this treatment has been in repeated instances accidentally followed with complete success, when had recourse to by midwives and others, under supposed mismanagement, and in defiance of the established rules of treatment in this special complication. And,

7th. In one very dangerous case, in which the previous hemorrhage was great, and continued in despite of the evacuation of the liquor amnii, and where the os uteri was imperfectly dilated, Prof. S. adopted, as a matter of principle and choice, the plan of separating and extracting the placenta, with complete success, the flooding immediately ceasing, though the child was not expelled for about two hours, and the mother recovering without one bad symptom.

67. *Hemorrhage from an Ulcer in the Arm concurrent with Menstruation.*—The following very curious case is recorded by Prof. D'OUTREPONT, in the *Neue Zeitschrift fur Geburtkunde*.

The subject of the case was a female in labour with her fifth child, to whom the professor was called, and whom he safely delivered of a living, premature child. She stated that three years previously she had received a blow on the right arm, near the insertion of the deltoid, after which a scab was formed there. Having rubbed off this scab, hemorrhage from the place supervened, which continued for a whole day, and was then arrested by the application of a compressing bandage. She immediately experienced extreme discomfort, and removed the bandage. The hemorrhage was then renewed and continued during her whole menstrual period. After that a dark-brown, hard, thick scab formed on the wound, which fell off at each menstrual period, and the hemorrhage was renewed and continued each time as long as the menses. This coincidence occurred for two years and a half, when she became pregnant, and the menses as well as the hemorrhage from the arm was suppressed, and the crust on the arm became as large as a hen's egg. After labour the scab did not fall off. Lactation continued only three days, when the child died. The lochia continued three weeks. Three months afterwards with the recurrence of menstruation the scab fell from the arm, and the hemorrhage returned and continued during the menstrual flow; however, the scab became smaller after each hemorrhage, which equally diminished whilst the menstrual flow became more copious.

68. *Delivery of Twins, whose heads were interlocked.*—Dr. HEDRICK notices a case of this in the *Neue Zeitschrift fur Geburtkunde*. The body of the first child, which had presented the knees, had been delivered, and its head was retained by a second child, the head of which had descended with that of the first into the pelvis, which was very large. The umbilical cord of the first had ceased to beat. After some efforts the accoucheur succeeded in delivering both children. That which had been born with the body first could not be recalled to life, but the other lived.

69. *Quadruple Births.*—An example of this is recorded in the *Northern Journal of Medicine*, (March, 1845,) by Mr. BLACK. The mother of the children was 32

years of age, of vigorous constitution, and had previously had six children, four males and two females, all uniparous. Her seventh labour commenced, according to her computation, at full term, Jan. 30th, 1845, at 5 A. M. At half-past seven two male children were born. After the birth of the second the pains ceased, and continued suspended until half-past one, when they recurred, and at two o'clock two female infants were expelled—the whole process occupying only nine hours.

The membranes of all the ova were ruptured artificially, and the proportion of liquor amnii discharged by each was as copious as is usually observed where the uterus contains but one ovum. There was no hemorrhage before delivery, during its progress, or after its completion. The placentæ, all of which were expelled almost immediately after the fourth infant, equalled, in the aggregate, the placentæ of three uniparous fœtuses. Three of them formed but one cake, and the fourth was distinct from these, but connected to them by a long process of the membranes. Each of the umbilical cords was as thick as we usually find the funis of the uniparous fœtus; and in one of them there was but a single artery, which was large.

The first male child presented the breech, and the second a foot; and the first female infant presented a foot, and the second the breech. The weight of the first male child was four pounds six ounces avoirdupois; and its length eighteen inches; and the weight of the second was four pounds five ounces and a half; the first female infant weighed four pounds seven ounces and a half, and its length was eighteen inches; and the second weighed four pounds three ounces, and in length measured seventeen inches. Both husband and wife are of a most amorous disposition, especially the former, who is three months younger than his wife and appears to be phthisical.

Another example of Quadruple Birth is recorded in *Oesterr. Med. Wochensch.*, No. 7, 1844. The mother was the wife of a peasant. She was 35 years of age, had been married at 24, and had had three sons and one girl. The husband was 36 years of age, emaciated and cachectic. The children were all male, presented the feet, and were born at intervals of half hours, the fourth excepted, which was born a quarter of an hour after the third, and was in a state of suspended animation. In each amniotic sac were about two pounds of liquor amnii, each placenta weighed about three quarters of a pound, and each fetus between three and four pounds, and varied in length from fifteen to seventeen inches. The mother recovered perfectly in five days. All the children died within six days from their birth—two from some unknown cause, and the remaining two from neglect.

70. *Obesity of the Umbilical Cord.*—Dr. HAMEL read to the French Academy of Medicine, in February last, an interesting memoir on the development of the adipose tissue in the umbilical cord carried to such an extent as to interrupt the fetal circulation by pressure on its vessels, and to occasion the death of the fœtus. This fatal accident, according to Dr. Hamel, is principally observed with women who pass suddenly from a state of extreme thinness to "embonpoint," under the influence of pregnancy, who live generously and take but little exercise. Women who, on the contrary, are lowered by privations, or live principally on vegetables, are exempt from this disease. According to Dr. Hamel, it is between the sixth and the eighth month of pregnancy that the death of the fœtus occurs. It is announced by a sudden uneasiness, occasional syncope, and the gradual cessation of the movements of the fœtus. As in abortion produced by other causes, the breasts become flaccid, the abdomen falls, and hypogastric pains are experienced. Generally speaking, however, women only become alarmed when the uterus being irritated by the decomposition of the fœtus, they begin to feel the first symptoms of abortion. Setting aside the symptoms which follow the death of the fœtus, there is no certain means of recognizing the state of the cord. The gradually increasing weakness of the fœtus, as indicated by the diminished strength of his motions, &c., is merely a symptom of debility which may be produced by many other causes. Having, however, seen abortion occur in many women who had, by an excess of good living, become very fat during pregnancy, and having found in these cases that the fœtus had died through obesity of the cord, Dr. Hamel draws the practical deduction that a great increase in the embonpoint of a preg-

nant female is dangerous to the foetus, and should be prevented by an appropriate regimen.—*Lancet*, April, 1845.

71. *Division of the Symphysis Pubis in certain cases of Obstructed Labour.*—In the *Northern Journal of Medicine*, for Jan. last, there is an interesting paper on this subject, by Dr. DAVID SMITH, of Glasgow. The following are the author's conclusions:

I. Craniotomy is, in all cases of obstructed labour, justifiable when the entire foetus cannot be extracted through the pelvis, from deformity at the brim, from osseous and certain other tumours, and from great contraction of the outlet by the near approach of the tuberosities of the ischia to each other,—the obstruction being more than can be overcome by the forceps, or other means, yet not so much but that a mutilated foetus may pass.

II. The Cæsarian section must be resorted to whenever the deformity is so great that a mutilated foetus cannot be extracted through the natural openings; and for which operation symphysotomy can never be substituted.

III. Symphysotomy is only applicable to cases in which the delivery cannot be accomplished by the forceps, and would require that craniotomy should be performed,—the obstruction being dependent on the *funnel-shaped* form of the pelvis, and satisfactorily ascertained to be such that a slight increase to the contracted diameter would permit an entire child to pass; but in no instance would it be justifiable to resort to this operation if any uncertainty existed either as to the degree of deformity of the pelvis, or the vitality of the child.

72. *Spontaneous Inversion of the Uterus.*—Dr. S. EDWARDS, of Bath, relates the following example of this in the *Lancet*, April 5th, 1845.

"J. C., æt. 24, of a weak leuco-phlegmatic temperament, and for some time previously in bad health, was taken in labour with her first child, Nov. 14, 1841. When seen by Dr. E. eight hours after the commencement of labour, he found on examination per vaginam, the os uteri 'about an inch and a half in diameter, thin, and extremely tense. The membranes were ruptured; passages well relaxed and lubricated; and the foetus presented naturally in the third position, (*Naegele*.) The pains were of a feeble character, occurring every quarter of an hour, and had but slight effect upon the os uteri. A second examination was made two hours afterwards, when the 'os' had become relaxed and dilated, with the exception of the anterior segment, which still remained firm and prominent. The pains were stronger and more frequent, and the patient, against my repeated requests, made use of the most powerful voluntary efforts in conjunction with them. The labour went on satisfactorily to the birth of the child. It having been separated, I placed my hand upon the abdomen of the patient, and the uterus was found firmly contracted. The insertion of the cord into the placenta could not be felt; and from the distended state of the vessels of it, I felt convinced the placenta was still attached. I consequently sat down by the bed-side, awaiting the return of uterine action, and about seventeen minutes after the birth of the child, a violent expulsive effort was made. Deeming the after-birth was being thrown off, I proceeded to examine, but was surprised to find, on approaching the genitals, a large tumour, of a pyriform shape, the base downwards, of the size of a child's head of six months old, lying between the thighs of the mother, of a soft, compressible, and yielding nature, and covered with a slimy, grumous matter. The sensation it communicated to the finger was vastly different to that of a placenta; and on rapidly tracing my fingers around it, and arriving at the left side, and somewhat posteriorly, came to the placenta, still partially attached, whilst that part of the womb from which the placenta was detached *was pouring out blood in great violence*. The case could not be mistaken. To return the uterus immediately appeared of vital importance; and the first thought that presented was,—shall I reduce the organ with the placenta adhering? Now the partial manner in which it was adhering, and the conviction, from its large size, that its removal would greatly facilitate the reduction of the uterus, I at once determined upon the prior detachment. This being readily accomplished, I grasped the uterus, with the intention of reducing it by causing the reversion to commence at the 'os,' and terminate at the 'fundus'; but this, owing to its soft and flabby state, I could not perform, and consequently employed my bearing on the latter (paying attention to the axes of the pelvis), carry-

ing it up before my hand. On arriving at the brim of the pelvis, the fundus shot up, as it were, from my hold to its proper situation, the neck, mouth, and superior part of the vagina following. I carried my hand, however, forward, to make sure of its complete reduction, when its irritation produced a smart contraction, and expelled the hand from its cavity. The uterus remained contracted perfectly a few minutes, when I applied a firm bandage and compress.

"The shock to the nervous system had been great, Mrs. C—— during the whole time having been in a complete state of syncope; pulse imperceptible; clammy perspiration and vomiting every few minutes; but on the reduction, and from the administration of stimuli, she somewhat rallied. In about fifteen minutes, symptoms of internal hemorrhage came on, the prostration of the vital powers as great as before. I removed the bandage, and the cold effusion being employed, the hand introduced into the cavity of the uterus, and the coagula removed, it again contracted. Ergot of rye with ammonia was then administered, and repeated twice or thrice with decided advantage. For about an hour the uterus continued alternately contracting and dilating, but was controlled by the firm and constant pressure of the hand through the parietes of the abdomen, which in such cases, experience has taught me, is more to be trusted than the bandage and compress. For upwards of five hours the poor creature continued in a state of fearful lipotymnia, notwithstanding the copious use of stimuli of various kinds, after which time she rapidly rallied, and was only disturbed by a hacking cough of that peculiar kind not unfrequently seen after severe hemorrhage.

"In the after progress of this case nothing occurred of note, with the exception of slight pain and tenderness over the uterine region, which, however, disappeared on the third day from confinement, and those numerous little symptoms usual in severe cases of flooding, and which it is deemed unnecessary to detail here."

73. Presentation of the Shoulder in six consecutive labours in the same woman.—Dr. WALTER, Prof. of Midwifery at Dorpat, has recorded in the *Neue Zeitschrift für Geburtshkunde*, 1844, a case in which the shoulder presented in six successive labours in the same woman. An attentive examination of her pelvis revealed no other anomaly than an unusual width at the hips.

M. Gery, it will be remembered (see No. of this Journal for October 1843, p. 494) has recorded a case of arm presentation in nine consecutive labours.

74. Absence of the Chorion.—Dr. HEDRICH states in the *Neue Zeitschrift für Geburtshkunde* that in a case of Cæsarian section performed after the death of the mother, no trace of chorion could be discovered though the most minute researches were made for it.

75. Reproduction of the Liquor Amnii.—Dr. HEDRICH relates in the *Neue Zeitschrift für Geburtshkunde* the case of a woman in whom the liquor amnii was discharged six weeks before term. Her abdomen was so soft and its parietes so flaccid that the parts of the fetus could be distinguished through them. The water was reproduced before delivery, which took place at full time.

76. Utero-gestation protracted to the three hundred and ninth day.—Dr. HEDRICH mentions in the *Neue Zeitschrift für Geburtshkunde*, the case of a woman, a primipara, who was delivered the three hundred and ninth day after coitus.

77. Remarkable case of Delivery during sleep.—M. SCHULTZE was called on the 25th of May, 1844, to attend the wife of an artizan, who had reached the full term of her fourth pregnancy. He found her lying in a state of profound somnolency, so that it was quite impossible to rouse her, either by violently shaking her or by applying to her nostrils the most powerful stimulants, such as ammonia and ether.

On the third day of this unnatural sleep, the woman, without awaking, was delivered of a healthy, living, and well-formed male child. On visiting the female the following day, M. Schultze found that she had not long spontaneously awakened from her sleep; and as she had no recollection of her delivery, she was somewhat astonished to find that the child had been born without her having been aware of it.—*Lond. Med. Gaz.*, May, 1845, from *Annales D'Hygiène*, Jan., 1845.

MEDICAL JURISPRUDENCE AND TOXICOLOGY.

78. *Remarkable Suicide.*—I find the following quoted from the *Gazette Médicale de Paris*, but from the name of the reporter, suppose that it may be an English case.

Mr. Jameson was called to a female, fifty years old, who had cut her throat with a razor. While attempts were made to staunch the wound, she drew something from her pocket, to which she endeavoured to attract their attention by signs, being unable to speak. Mr. Jameson took it out of her hands, and found it to be a considerable portion of the walls of the respiratory tube. It consisted of the cricoid cartilage entire, of the left wing of the thyroid, of the right arytenoid, of a part of the upper rings of the trachea and some fibres of the muscles of the larynx. The unfortunate female stated by signs, that the mutilation was committed by herself and that she had made five several attempts before she completed it. She survived 34 hours.

It is observed that if this female had died without any one being present to note the circumstances, they would unavoidably have induced a strong suspicion of homicide. How many would have credited the assertion, that she had herself completed the horrid dissection and then removed the parts to her pocket.

T. R. B.

79. The *Umbelliferous Narcotics*.—In a communication to the Royal Society of Edinburgh, Dr. CHRISTISON proceeded to relate a series of experiments instituted by him with a view of determining the influence of season on the activity of the poisonous narcotic plants of the family *Umbelliferae*.

The plants belonging to this family are for the most part aromatic and stimulant and destitute of poisonous properties. In four species only, have narcotic properties been unequivocally recognized, viz. *Conium maculatum*, *Enanthe crocata*, *Cicuta virosa* and *Aethusa cynapium*, but these are universally held to be highly energetic.

1. *Conium maculatum*, Common Hemlock. No accurate information is yet possessed as to the influence of season on the activity of this species, for all investigations on the subject are vitiated by the uncertain strength of its preparations and the ignorance which prevailed till very lately as to the conditions required for securing their uniformity. The author has found by experiment, as Professor Geiger had already been led to conclude, that every part of the plant is poisonous, both the root, the leaves and the fruit, and that the root is least active, the leaves much more so, but the fruit the most active of all. The root is commonly held to be most active in midsummer, when the plant is in full vegetation and coming into flower, but this belief is founded only on a single and not altogether conclusive experiment made by Professor Orfila. This author found this part of the plant to be so feeble at all times, that its respective energy at different seasons could not be satisfactorily settled. The expressed juice of twelve ounces of roots had no appreciable effect on a small dog in the end of October, or towards the close of June; but an alcoholic extract of six ounces in the beginning of May killed a rabbit in thirty-seven minutes, when introduced into the cellular tissue. The leaves are commonly thought to be most energetic when the plant is coming into flower in midsummer, and to be very feeble while it is young. The author finds it to be probable, that the leaves are very active in midsummer; but he has likewise observed that they are eminently energetic in the young plant, both in the beginning of November and in the month of March, before vegetation starts on the approach of genial weather. Thirty-three grains of a carefully prepared alcoholic extract, representing one ounce and a third of fresh leaves, killed a rabbit in nine minutes, when introduced into the cellular tissue. The fruit is most active, when it is full grown, but still green and juicy. It then yields much more of the active principle *coma*, than afterwards, when it is ripe and dry. The author added, as a fact contrary to general belief, that he had found the ripe seeds of hemlock and an alcoholic extract of the leaves, to sustain no diminution of energy by keeping, at all events, for eight years.

2. *Enanthe Crocata*, Dead-tongue. This species is universally considered to be the most deadly of all the narcotic *Umbelliferae*. Many instances of fatal poisoning

with its roots have been published during the last two centuries, in the various periodicals of Europe. It has repeatedly proved fatal in two hours, and a portion no bigger than a walnut has been thought adequate to occasion death. Fatal accidents have occurred from it in England, France, Holland, Spain and Corsica. The root would seem from these cases, to be the most active part; but few observations are on record as to the effects of the leaves and none as to the fruit. The root appears from these cases to be very active in all seasons, at least in the beginning of January, the end of March, the middle of April, the middle of June and the middle of August.

The author proceeded to inquire carefully into the effects of season upon this species as it grows wild in the neighbourhood of Edinburgh, but was surprised to find that every part of the plant in this locality is destitute of narcotic properties at all seasons. The juice of a whole pound of the tubers, that part which has proved so deadly elsewhere, had no effect, when secured in the stomach of a small dog, either in the end of October, when the tubers are plump and perfect, but the plant not above ground, or in the month of June, when it was coming into flower; and an alcoholic extract of the leaves and that prepared from the ripe fruit, had no effect whatever, when introduced into the cellular tissue of a rabbit, under the same condition, in which the common hemlock acts so energetically. By a comparative experiment he ascertained that tubers collected near Liverpool, where one of the accidents alluded to above happened in 1782, act with considerable violence on the dog, and he briefly noticed some experiments, made at his request, by Dr. Pereira, with the *Œnanthe* of Woolwich, showing that there also it is a powerful poison to the lower animals. Climate seemed to the author to furnish the only adequate explanation of these extraordinary differences, yet the plant grows in all parts of Scotland with great luxuriance.

3. *Cicuta Virosæ*, Water Hemlock. This species has also been held to be a deadly poison ever since an express treatise on its effects was published by Wepfer in 1716, and repeated instances of its fatal action have been observed since and some of these very recently, in Germany. The root is the only part which has given occasion to accidents; it has proved fatal in two hours and a half. Nevertheless, this plant too seems innocuous in Scotland, or nearly so, although, like the last species, it grows with great luxuriance. The juice of a pound of the roots collected in the end of July while the plant was in full flower, produced no narcotic symptoms, and the only effects observed, namely, efforts to vomit, might have arisen from the operation which is necessary to secure the juice in the stomach. An alcoholic extract of the leaves collected at the same time, and a similar preparation made with two ounces of the full grown seeds, while still green and juicy, had no effect whatever when introduced into the cellular tissue of a rabbit, except that inflammation was excited, when the extract was applied.

4. The author has not yet had an opportunity of trying the effects of the fourth species, *Æthusa Cynapium* or Fool's Parsley. *Edinburgh New Philosophical Journal*, April, 1845.

T. R. B.

80. *Ergot Bread*.—At a meeting of the Academy of Sciences of Paris held December 16, 1844, M. Bonjean gave an account of two instances in which spontaneous gangrene was induced from eating ergotized rye bread. One subject was ten years old, and in this case, it was necessary to amputate both legs; the other, twenty-eight months old, lost the right leg by spontaneous separation. Both survived this severe mutilation. Other members of the family who had partaken of this food were indisposed, but no serious consequences ensued.

On the 13th of January, M. Bonjean made an additional communication. The oldest child was dead. On dissection, the brain and its meninges were found healthy, but the meningeal veins were much distended. There was about a coffee cup full of serum in each ventricle. The right lung was inflamed, with an abscess externally. The left lung also pneumonic. The liver was healthy. The veins of the stump were healthy, but its arteries were obliterated and converted into a fibrous cord for an inch. No other alterations could be observed.

The other child, 28 months old, was doing well. The cicatrix arising after the spontaneous separation, was nearly healed.

T. R. B.

81. *Doubtful case of Concussion of the Brain from external injury.*—(British American Journal of Medical and Physical Science, No. I.)—The following is one among a thousand instances of uncertainty as to the effects of injuries to the head.

While playing on the 17th of December, 1841, P. C., aged twenty-one years, received what was described as a very slight blow on the left side of his head, from the open hand of one of his companions, which staggered him for a moment, but he was soon able to walk home to his house, a distance of one hundred and fifty yards. Dr. David saw him five hours after the accident—he was then seated in a chair, but appeared quite restless, although he could answer coherently. His pulse was full, but not quick, and no trace of external injury could be discovered. As he had been costive, a cathartic was ordered, with cold applications to his head. He was seen again the next day, and was found walking about, and apparently quite well, and did not complain of any pain. The medicines prescribed had acted powerfully. In the night, Dr. David was again suddenly called to him: he was insensible, incoherent in his language, the pupils were dilated and unaffected by light, and his hands extended, endeavouring to get hold of imaginary objects before him. There was also a shivering, which lasted about an hour, after which he became sensible and complained only of intense pain over both eyebrows. He was bled to syncope, and ordered repeated doses of calomel, with castor oil, under which treatment he became much better, till the morning of the 21st, when he suddenly became comatose, and died within eight hours.

On dissection, fourteen hours after death, no fracture of the skull, nor engorgement of the cerebral vessels, nor any effusion under the membranes could be found, but on cutting into the substance of the brain, and laying open the ventricles, they were found distended with at least six ounces of limpid fluid, and with the exception of the septum lucidum, which was soft and easily torn, there was not the slightest appearance of inflammation to be found in the ventricles, or, indeed, any other part of the brain, which was firm, and perfectly healthy.

"I assured the friends, (says Dr. David) that the morbid appearances were not the result of the blow the man had received three or four days before his death, but the result of some latent disease which had been going on for months before he received the injury." But had there been no dissection, the consequences would doubtless have been attributed to the blow.

T. R. B.

82. *Raciborski on the Nature of the Corpora Lutea, and the difference in their appearance, according as the expulsion is followed or not by conception.*—The following results were announced by him to the Royal Academy of Medicine, October 15, 1844.

1. The corpora lutea are produced by an hypertrophy of the granular substance, which lines the internal membrane of the Graafian vesicle. 2. The transformation of this substance commences as soon as the ovule arrives at maturity, and the vesicle is then prepared to break and give passage to it. 3. As soon as the Graafian follicles burst, the transformation develops rapidly. But an important distinction occurs. If the ovum has been expelled spontaneously (as after every menstrual period or the epoch of the rest) the granulations increase in number and size, under the form of a thin yellowish membrane, adherent to the membrane of the follicle, and in the cavity which it forms, a small clot of blood is to be found. If, on the contrary, in the female, conception coincides with the expulsion, the elements of the granular tunic increase so much in size and number, that in a little time, they form a voluminous mass, which fills the whole cavity of the follicle. And it is difficult to discover in the centre of this yellow mass, a small space filled with a whitish, fibrinous tissue, which seems to be the former cicatrix shrunk by the hypertrophy pressing on it. 4. In all females delivered at the full time, corpora lutea of this description exist. But it is remarkable how soon they decrease and are atrophied, after delivery. Thus a corpus luteum which on the third day was eight lines in diameter, was only five lines on the tenth, and in three months after, hardly one line, and almost colourless. 5. It is thus easy to ascertain on inspection, whether the ovum has been expelled spontaneously, or is followed by conception.—*Bulletin de l' Academie Royale de Medecine*, October, 1844.

T. R. B.

83. *Case of Death from Rupture of the Splenic Vein.* By Dr. MILING.—A. A., 26 years of age, of great muscular strength, laid a wager that he would perform a certain piece of work with a shovel or dung-fork, in the farm-yard, in the course of two hours. He had almost completed the work, and won the wager, when he began to complain of pains in the bowels. He drank several glasses of brandy, and went on with his labour; but the pain in the abdomen increased, he was seized with a violent shivering fit, and had to be carried to bed, where he fainted. He was ordered a dose of castor oil, and an oily emulsion. In the evening he still complained of a feeling of chilliness, of pains in the belly, and a disposition to vomit. His belly was very much distended, and painful on pressure; pulse extremely small and contracted; countenance sunken, with the expression of deep suffering. He was bled, but syncope supervening, the vein had to be stopped. Twelve leeches to the belly, and repeated clysters were prescribed, the patient not having yet had any opening from the bowels. These means having remained without effect, he was put next morning into a warm bath, and felt himself relieved, but the distension of the belly went on increasing. He now became excessively anxious; he had long fits of shivering, cold extremities, clammy sweats, hiccough, and facies hippocratica. In the afternoon, having requested to have another warm bath, he was put into it, but within five minutes he was taken out dead.

The body was extremely pale; the abdomen distended to bursting. As soon as the abdominal parietes were cut through, an interminable stream, as it appeared, of fluid blood flowed from the opening, so that the room immediately became inundated with it. All the blood having at length drained off, the viscera, liver, spleen, bowels, &c., presented themselves without a trace of inflammation. After a long search, Dr. M. at length discovered a rent, several lines in length, in the splenic vein, from which the fatal hemorrhage into the abdomen had taken place.—*Medicinische Zeitung*, No. 8, 1844.

84. *Concealed Pregnancy and Delivery, with suspected Child-murder.*—All that remained of the body of the child in this case was one or two convolutions of the small intestines filled with meconium; the remainder of the body had been devoured by a dog. The statement of the prisoner was as follows:—That she had had connection with one of her father's servants once only about seven months previous to her delivery; that she menstruated once sparingly after connection; that at one A.M., she was seized with labour pains, and delivered in about an hour thereafter of a child, which appeared small and premature; that she divided and tied the cord, and hid the body in the straw of the bed; that during the following day she went about her work in the house and the field as usual; that at two P. M., the placenta came away about the size of the fist, and that she then buried the child. Among other questions raised by this case, it was asked whether, from the appearance of the intestines presented for examination, and from an inspection of the mother, any inferences could be deduced with regard to the truth of her statement as to the immaturity and non-vitality of the child? To this the following answer was given:—The only portion of the child presented for inspection is a piece of the small intestine about ten inches long; the mucous membrane is already putrid; the smooth, white, thin and almost transparent appearance of the muscular coat, the thinness of the serous tunic, the absence of fat in the mesentery, and the distension of the intestine with meconium, give tolerably strong grounds for the belief that the fetus was only of seven or eight months' gestation. This supposition is strengthened by the very trifling relaxation of the maternal genitals; the very slight marks of delivery; by the distension of the abdomen not having been sufficient to be observed by others; and by the delivery having been almost without pain. It is not probable that the child was born alive, but this fact cannot be ascertained with certainty. The presumption is, the mother did not wish the child to die, as she tied the cord.—*Northern Journ. of Med.*, May, 1845, from *Henke's Zeitschrift für die Staatsärztekunde*, No. vii., 1844.

HYGIENE.

85. *On the Preservation of the Health of those who work in Lead.*—M. GENDRIN has recently published in a French journal (*La Presse*) an article on the preservation of the health of those who work lead, and its various preparations, which we think sufficiently important to warrant our laying it in full before our readers.

“The morbid symptoms which ruin the health and endanger the life of those who labour in manufactories of carbonate of lead and of minium, are shared,” says M. Gendrin, “by all whose occupations lead them to employ lead and its preparations. More than forty professions are attended with danger to those who follow them, from this source. Among them the most dangerous are those in which are prepared the chemical products, of which lead is the basis; such as manufactories of litharge, of carbonate of lead, of minium, of oxide of lead, establishments in which lead in the metallic state is worked, (those for the fusion of lead for the manufacture of shot, and of printing types,) works for the vitrification of the oxide of lead, (potteries, china and crystal works,) trades in which the salts of lead are used, (house painting, black dying of horsehair stuffs, glazing of visiting cards,) &c. &c. In all the establishments devoted to these purposes, most of which are on a very extensive footing, a large number of workmen are exposed to the action of a great quantity of poisonous matter, volatilized in a state of impalpable dust, or vapourized, or dissolved in fluids.

“Thus brought in contact with the absorbing surfaces of the economy, the poison acts with the greatest possible energy, owing to the activity of the tegumentary functions, exaggerated by labour and by the elevated state of the temperature. Thence it is that we see the unfortunate beings whom want of work in other professions throws into these, obliged to cease their labours after a few weeks, and forced to enter the hospitals suffering from the most serious symptoms. Unfortunately for them, the violent abdominal pains which constitute the principal symptom of poisoning by lead, are always followed by extreme debility, and often by incurable paralysis. In some instances, happily rare ones, those who work at the preparation of minium are attacked with epileptic symptoms, which either terminate in death or leave the patients in a state of insanity, or of cachectic debility, which, generally speaking, our art cannot remedy.

“In the presence of so great an evil, it becomes a duty for all medical practitioners to unite their efforts to attenuate and to prevent the disastrous effects of poisoning by lead. It is this duty which I accomplish,” continues M. Gendrin, “in making known the result of fourteen years’ experiments respecting the treatment of saturnine diseases, continued without interruption in the medical divisions of the hospitals, the Hotel Dieu, Cochin, and La Pitié, entrusted to my care. I do not hesitate to say, with a feeling of deep conviction, that nearly all saturnine diseases may be cured, rapidly and securely, by an easy and cheap remedy; and, the most important point of all, that the occurrence of saturnine affections may be prevented.

“Whatever may be its gravity, unless it be complicated by cerebral symptoms lead colic may be always cured by the ingestion alone of sulphuric acid, in the dose of from a drachm and a half to two drachms, mixed with about three pints of water, for the four-and-twenty hours. The cure takes place in six days, on an average, if the disease is extreme; in three days, if it is slight.

“Whenever the skin of the patient is covered with a layer of lead, as is the case with nearly all the workmen who come out of workshops in which large masses of the metal are operated upon, to the sulphuric acid, administered internally, must be added the external use of sulphurous and soap baths, the cleansing action of which is increased by the deterersive action of frictions performed with a brush.

“The nervous and cerebral symptoms only occur, generally speaking, when the patient has already suffered from several saturnine affections inefficiently treated. If they manifest themselves at the first attack, it is because the skin is covered by a layer of metallic powder which keeps up permanent poisoning of the system. Even in these cases, which are the most difficult to manage, if the disease is attacked in time, by insisting longer on the sulphurous and soap baths, a cure is effected in from eight to ten days on an average. The constant efficacy of this

simple treatment is to be explained by the conversion into an insoluble, harmless salt, (the sulphate of lead,) of the mineral poison absorbed, and by the ablation of the particles of lead deposited on the tegumentary surface.

"The preservative treatment is based on the same principle. In order to preserve workmen from saturnine affections, the following precautions must be adopted:—Two glasses of the sulphuric lemonade must be drank each day; the parts of the body which are uncovered during labour must be washed with soap and water at each cessation from work; the workmen must have clothes on purpose to work in. Those who are employed in localities where the atmosphere is loaded with a great quantity of metallic dust, or poisonous vapours, ought, also, to take two general soap baths each week, scrubbing the body with a flesh-brush. The omission of these precautions during six or eight days, or even during two or three, if the workman commits excesses in drinking, is often sufficient to allow the symptoms of poisoning to appear. Thence the necessity of continuing for some time the use of the sulphuric lemonade and the soap lotions, even after ceasing to work at lead. Sulphuric lemonade may be thus taken without any injury to the health. The work people of the manufactory of carbonate of lead of Clichy have taken it during two years and a half, without experiencing any ill effects whatever.

"No one need be surprised," says M. Gendrin, "that I should speak with confidence, even with authority, on the subject. What I have above stated is merely the interpretation of facts. Since 1831, I have thus treated between four and five hundred cases, all of which have been carefully taken down by my house physicians, nearly all of whom are now in practice, and have adopted my practice, as have also many other enlightened physicians at home and abroad. M. Roard, the learned chemist, who is at the head of the manufactory of Clichy, (the principal manufactory in Paris for the carbonate of lead,) has made his workpeople use the sulphuric lemonade during two years and a half. This precaution alone has enabled some of them who had previously been attacked several times by lead colic, to work during six months without intermission, and without experiencing the slightest indisposition. The inspectors and workpeople of various other establishments have likewise owed the preservation of their health to the adoption of these precautionary measures.

"The general adoption of the treatment which I recommend would be attended with great advantages. It would, firstly, preserve the health of men whom poverty alone, generally speaking, compels, in order to give bread to their families, to devote themselves to occupations which only reward them with disease, infirmities, or death; secondly, the manufacturers would find as many labourers as they wished, who, being able to remain for a considerable length of time at their occupations, would acquire a thorough knowledge of the manipulations in which they are engaged, a knowledge which they now seldom, if ever, possess. How is it possible to have workpeople well acquainted with the various manipulations required in establishments of this kind, when, either from actual disease, or from the fear of it, they seldom remain in them more than a fortnight? If the workshops were to cease to be unhealthy, the work would be better executed, the price of labour would diminish, and the products would be more abundant. The preservative measures which I have pointed out are attended with but very trifling expense. Sulphuric acid and soft soap are so cheap, that an exceedingly small outlay would meet the expense incurred. In large establishments, the water furnished by the steam-engine, which is generally wasted, might be used for baths.

"In addition to the remedial and preservative measures which I have recommended, there is still much to be done to preserve those who work lead and its preparations, by mechanical precautions. Is it not deplorable, for instance, that the sieves for minium, and the mills for the carbonate of lead, should still, in many establishments, be moved by hand?

"My task is now fulfilled. I have proved that we possess the means of putting a stop to a great evil. A general administrative law is wanted; and it is the duty of a government to adopt those measures which are calculated to preserve the health of the population entrusted to its care."—*Lancet*, May 31st, 1845.

86. *Health of Workmen in Tobacco Factories.*—M. MELIER read a report to the French Academy of Medicine, April 22d last, on an official communication from

the Minister of Commerce respecting the health of workmen employed in manufacturing tobacco.

M. Melier first drew attention to the great diversity of opinion that existed among physicians as to the influence of manufacturing tobacco on the health. According to Rammazini, no occupation could be more dangerous; according to Parent Du Chatelet, it was completely innocuous. The perfect organization of every department of the royal manufactories of tobacco in France afforded an opportunity of ascertaining which of those two opinions came nearest the truth. Every, the minutest detail in those institutions was accurately known and noted, and physicians were attached to each factory, who, in addition to superintending the sick, made yearly reports, specifying particularly the state of health of the workmen, the particular diseases with which they were affected, and any peculiarities that those diseases presented.

The document communicated to the Academy consisted of the reports for the year 1842, made by the physicians of ten tobacco factories. According to those reports, tobacco seldom produces any prejudicial influence on the health of the workmen; two stages only of the processes, that in which snuff is fermented, and that in which tobacco for smoking is dried, exert a slight influence on the workmen. The reports even go farther, for the physicians of those establishments seem inclined to think that being employed in manufacturing of tobacco is prophylactic, and even curative in certain diseases, especially in phthisis. The importance of those questions, especially of the latter one, is obvious; with a view to their solution, M. Melier repeatedly visited many tobacco factories, chiefly those in Paris, as being the most important of all, and now gave a rapid view of the various processes conducted in them.

In a hygienic point of view those processes may be classed into two categories, according to the state of the plant, particularly whether it is operated on before or after it has been subjected to heat and fermentation—two conditions which greatly favour its activity.

Notwithstanding that steam has replaced manual labour in those factories wherever it has been found practicable, and that the workmen are thereby guaranteed from many inconveniences to which they were previously subjected, still, according to M. Melier, the manufacture of tobacco is by no means exempt from exerting a prejudicial influence on the workmen, and indeed it would be difficult to conceive how it could be otherwise, when we recollect the composition of the plant, that it contains *nicotin*, one of the most violent poisons. Many of the workmen experience its effects. Its primary effects are characterized by headache, more or less intense, accompanied with nausea, loss of appetite and of sleep, and diarrhoea: those symptoms last from eight to fifteen days, and then usually disappear. The consecutive effects of the poison are manifested by a peculiar alteration of the complexion, which assumes a grayish tinge. This latter effect has been observed in but a few workmen after a very considerable period, and in certain factories only. M. Melier supposes that it is connected with a peculiar state of the blood, arising from the absorption of the principles of the tobacco. This opinion he supported by several considerations. He caused the urine to be analyzed by M. Felix Boudet, and there is every reason to suppose that it contained nicotin.

The effects of tobacco are then far from being so injurious as was formerly supposed; no determinate disease is produced, but it exerts the physiological effects that might be anticipated from its composition. Does tobacco exert any salutary influence to compensate for its injurious effects? If such were the case, there would be nothing contradictory in the fact, for most of our therapeutic agents owe their salutary virtues and poisonous power to the same elements. It would seem that the emanations from tobacco are occasionally salutary. The workmen are convinced of their efficacy in rheumatic pains. If those pains have been contracted after a chill, they know of no better remedy than a good sleep on a heap of tobacco. In connection with this point, M. Melier referred to a series of cases communicated to him by Dr. Berthelot, from which it would appear that a cataplasm, made of linseed meal and decoction of tobacco, promptly assuages rheumatic pains, and effects a cure on the average as quickly as any of the modes of treatment commonly used in that disease.

The manufacturing of tobacco seems calculated to preserve the workmen from

intermittent fevers, and also from being attacked by certain epidemics; it also is prophylactic against itch. Is working in a tobacco factory a preservative from phthisis, or does it retard the progress or effect the cure of that disease? M. Melier could not discover any facts that warrant an affirmative answer to those questions, while he knows of some which go to negative them.—*Dub. Med. Press*, May, 1845, from *Gaz. Méd. de Paris*.

MEDICAL STATISTICS.

87. *Statistics of Tubercles.*—In five hundred *post-mortem* examinations, carefully made by Dr. Cless, of Stuttgart, one hundred and seventy-six were in tubercular subjects, the greatest number of which died with symptoms of phthisis. Very few affected with tubercles died of other diseases. He endeavours to solve the two following questions:—

- 1st. What influence has age on the development of tubercles?
- 2d. What connection is there between tubercular affections and mortality in general?

In the subjoined table the sexes are blended together till the age of fifteen. The number of phthisical females is less than that of males; which may depend upon particular circumstances in the hospital, but generally speaking, at Stuttgart, there are more consumptive men than women:

Age	Tubercular.			Non-Tubercular.			Total.			No. of Tubercular subjects in one hundred deaths
	Male	Fem.	Tot.	Male	Fem.	Tot.	Male	Fem.	Tot.	
Under one year			3			47			50	
One year			3			7			10	10
From 2 to 5 years			11			6			17	64
" 6 to 9 "			2			3			5	50
" 10 to 14 "			8			7			15	
" 15 to 19 "	6	1	7	11	15	26	17	16	33	21
" 20 to 24 "	17	6	23	31	29	60	48	35	83	27
" 25 to 29 "	25	4	29	14	15	29	39	19	58	50
" 30 to 30 "	36	6	42	22	19	41	58	25	83	50
" 40 to 49 "	15	4	19	16	10	26	31	14	45	42
" 50 to 59 "	10		10	22	14	36	32	14	46	21
" 60 to 69 "	5	1	6	14	13	27	19	14	33	
" 70 to 79 "	2	1	3	7	5	12	9	6	15	18
" 80 to 90 "	1		1	2	4	6	3	4	7	
	117	23	167	130	124	333	256	147	500	

The youngest of the three infants under one year, was eighteen weeks old; both lungs, the bronchial glands, and the spleen, were choked up with crude miliary tubercles. The second, aged seven months, besides numerous tubercles, had three large cavernous excavations. In the third, aged eight months, the tubercles, very numerous in both lungs, in the bronchial glands, and spleen, had attained the size of a pin's head, and even of a pea.

This table confirms that which was previously known: that the greatest frequency of tubercles is observed in infancy; in fact, in thirty-seven children, from two to fourteen years, twenty-one were tuberculous, and in sixteen subjects only were no tubercles discovered.

These observations of M. Cless, although having reference merely to a small number, are very important, inasmuch as they have been made in civil practice.

Towards puberty the mortality of tuberculous subjects notably diminishes, again to become greater after this period, and to decrease afresh after 40 years. Subjoined is a comparative table:—

	Cless.	Louis.	Boyle.	Clark.
From 15 to 20 years	5	8	10	9
" 20 to 30 "	37	31	23	28
" 30 to 40 "	30	27	23	24
" 40 to 50 "	14	18	21	18
" 50 to 60 "	7	9	15	10
above 60 "	7	4	8	7

To resolve the second question, M. Cless has taken for his basis the work of Hoffmann, on the mortality in Prussia, from 1820 to 1835. The first column indicates the proportion of individuals in 10,000, who died at different periods of life, not including the still-born; the second indicates the number of individuals

in whom tubercles were discovered; and the third, the proportion in which, according to their ages, one thousand tuberculous persons died:—

	In 10,000 deaths.	Tuberculous.	In 1000 Tuberculous there died
Under 1 year	2494	50?	20
From 2 to 14 years	2399	1200	456
" 15 to 19 "	255	60	23
" 20 to 29 "	549	200	76
" 30 to 39 "	565	280	106
" 40 to 49 "	660	270	103
" 50 to 59 "	814	170	64
" 60 to 69 "	1022		
" 70 to 79 "	843		
" 80 to 89 "	348		
above 90 "	51		
	10,000	2620	1000

According to this table the number of children who died from tubercles, compared to other children, who died at the same age, is very surprising. At the age of puberty the mortality in general, as that of the tuberculous, was extremely low. It results from the third column that half of the phthisical individuals died before 20 years of age, and out of this number nine-tenths between the age of 3 and 15. We may reckon thirty-five per cent. of deaths between 20 and 60 years of age, of which one-half is above, and the other under 40; and for the remaining period of life fifteen per cent.—*Prov. Med. Journ.*, Feb. 19th, 1845, from *Gazette Méd. de Paris*.

88. *Statistics of Hernia*.—M. MAISONNEUVE has made a statistical report of 11,644 cases of hernia, which were examined, during a period of six years, at the Central Bureau, Paris; he thus distributes them:—

Of 11,644 cases of abdominal hernia of every description, 8,790 were observed in males; 2,854 were observed in females.

Of 8,790 cases of hernia observed in males, 8,237 were inguinal hernia; 307 were crural hernia; 246 were umbilical hernia.

Of 2,854 cases observed in females, 1,112 were inguinal hernia; 639 were crural hernia; 560 were umbilical hernia; 543 were vaginal hernia.

Of 8,237 cases of inguinal hernia observed in males, 4,483 occurred on the right side; 3,738 occurred on the left side; 16 not determined.

Of 1,112 cases of inguinal hernia in females, 542 occurred on the right side; 564 occurred on the left side; 6 not determined.

Of 307 cases of crural hernia observed in males, 171 occurred on the right side; 125 occurred on the left side; 11 not determined.

Of 639 cases of crural hernia observed in females, 344 occurred on the right side; 255 occurred on the left side; 40 not determined.

From these figures, Mons. Maisonneuve deduces the following corollaries:—

First. Hernia in males are to hernia in females, as 3 to 1.

Secondly. In 100 herniae found in males, 93 were inguinal, 4 were crural, 3 were umbilical; whilst, in 100 cases of hernia found in females, the proportion was 40 inguinal, 21 crural, 20 umbilical, 19 vaginal.

Thirdly. In men, inguinal hernia are met with as often on both sides as on one only, and in the latter case, those of the right side are to those of the left, in the proportion of 5 to 4.

But in women, inguinal hernia are met with on both sides, three times out of four, and those of the right side are to those of the left, in the proportion of 5·42 to 5·64.

Fourthly. In men, crural hernia are met with on one side only, three times out of four, and those of the right side are to those of the left, as 7 to 5; whilst in women, crural hernia are met with on one side only, 4 times out of 5; and those of the right side are to those of the left, as 7 to 5.

Under the head, vaginal hernia, are included all tumours of the vagina and uterus presenting externally, and requiring the use of the pessary, as cystocele, rectocele, and prolapsus of the vagina and uterus.

Under the head, umbilical hernia, are included hernia of the linea alba, and displacements referable to the neighbouring regions.—*Med. Times*, May 10, 1845, from *Gazette des Hopitaux*.

AMERICAN INTELLIGENCE.

ORIGINAL COMMUNICATIONS.

Two Cases of Femoral Hernia, with some Remarks. By W. L. SUTTON, M. D., Georgetown, Ky.

CASE I.—*Intestine strangulated, mortified and adherent to the neck of the sac—Incision from within the bowel—Temporary artificial anus—Permanent recovery.*—Dec. 12, 1843, Dr. Craig called at my office, and informed me that he had a case of strangulated hernia on hand, which he very much feared would speedily terminate fatally, but if I would share the responsibility with him, we would give the patient what little chance an operation at that late period would offer. He went on to state that he had been in attendance on the patient, a lady about 50 years old, for about a week, during which time continual vomiting, pain, and some distension of the abdomen, and obstinate constipation, were the prominent symptoms; that suspecting hernia he had repeatedly inquired as to the existence of any tumour in the groin or any part of the abdomen, but had been as repeatedly, positively assured that no such swelling existed; that having full faith in the good sense of his patient he had credited her statements; that four days previously the bowels were freely evacuated, yet at his visit soon afterwards the distressing symptoms were as bad as ever, thus further discrediting the idea of their depending on strangulated hernia; but that a few hours before his calling on me he had, altogether accidentally, learned that a swelling did exist in the right groin, and that upon examination he had satisfied himself that a small strangulated crural hernia was the real evil; that when taxed with having deceived him, she answered that “the swelling had existed for 25 or 30 years, during which time it was often as painful as it had been during this illness, and had always got well, and therefore she did not think that it had any thing to do with her sickness;” that for several days what she vomited was very stercoraceous; that at present she was nearly moribund, and if any thing were attempted there was no time to lose. We therefore immediately visited her, and I found the case fully answered the description. The pulse was very frequent and weak; countenance haggard, and bedewed with a cold perspiration; abdomen distended and tender; mind wandering. Dr. C. having previously satisfied himself of the existence of hernia, it only remained that I should do the same; and as soon as possible we shaved the parts and performed the operation in the usual way until the sac was opened, (which gave vent to about a tablespoonful of turbid fluid, very strongly characterized by the same stercoraceous odour which marked the fluids ejected from the stomach,) when we ascertained that about three inches of the small intestine, in a gangrenous state, occupied it, no adhesion existing at this part. Upon attempting to run the finger in the sac, and on the outside of the bowel, to the point of stricture, we could not reach it, but the sensation was as when we put on a glove, the fingers of which are too short. We next tried to pass a director, with no better success; then a probe, and again the flat end of the probe. After repeated trials in every direction, and finding no point which would admit the passage of any

thing, we passed a finger *within* the gut up to the stricture, and upon that a probe-pointed bistoury within the stricture, and by turning the edge to the stricture, it readily gave way so as to admit the finger. The integuments were now lightly drawn together, and dressed with adhesive strips, and the patient put to bed.

For a few hours the patient appeared to mend rapidly: her vomiting subsided: after eight or ten hours she had a small discharge per anum,—and not long afterwards one from the wound. The abdomen continued distended and tender, but something less so than before the operation. After the first 24 hours her improvement was very slow, the abdominal symptoms giving way very slowly; she did not have another discharge per anum for several weeks. But at length they became more and more frequent, whilst those from the wound as gradually diminished; and at the expiration of five months the incision had entirely healed, and from that time to this, January 27th, 1845, has enjoyed better health than for a number of years past, inasmuch as she has been entirely free from the frequent annoyance from the hernia, to which she had been subjected for the last 25 or 30 years.

Remarks.—I am not aware that such an operation has ever been reported, and I apprehend that the first idea in the mind of most readers will be one of decided reprehension. Such being the case, I may be allowed to offer a few remarks on the subject. We found ourselves with a case of adhesion between the protruded bowel and the sac, occupying the whole periphery of the stricture, occasioned, I presume, by the repeated attacks of incarceration to which our patient had been subject for many years—the bowel mortified, and our patient nearly dead: indeed, when we commenced the operation we believed and informed the friends that we regarded success as barely possible. It so happened that the day was rainy and dark, and we had light from a single small window.

We had two alternatives; 1st, to make an opening through the tendons above the femoral arch, and then slit down to the stricture, and *cut that upon the gut*; for we could not expect to avail ourselves of a director; or, 2dly, *to cut the stricture through the gut*. The case did not admit of slow councils or slow operations; and when we reflect upon the time necessary to perform the first-mentioned operation under the circumstances, the delicacy of the operation, and the danger of puncturing the bowel above the adherent part, and that the crural arch must be divided, and, on the other hand, that the stricture had completely obliterated the cavity of the bowel, and might be reached by making a very small incision through it, which most probably would be bounded by adherent portions, the very slight scratch on the edge of the stricture, which will suffice to liberate the strangulation, and that the operation itself is the work of but a moment, albeit a moment fraught with momentous consequences, I think the proceeding in the case may be viewed with more leniency. One thing ought to have been ascertained, but was not—the existence or not of adhesion between the outside of the sac and the stricture.

CASE II.—Repeated strangulation—Absence of vomiting—Death.—On Monday, Nov. 11, 1844, I visited A. Parker, in the absence of his regular physician, and received the following history of his case. On the 4th inst., whilst straining at stool, he felt a slight sensation in the right groin, as if something had given way, but no pain followed. On the 5th, after riding eight or nine miles, he felt some pain in the same spot, which gradually

increased and spread over the abdomen, being not very severe, but sufficient to render him very uncomfortable. He rode home in the evening without any increase of his discomfort. He continued to suffer, but not severely, until Thursday, when he had a motion from his bowels. On Saturday the distress became more severe, when he vomited, two or three times, a little water having no unpleasant smell. From this time until I saw him, he remained in much distress, no stool or vomiting. I found him with an abdomen somewhat tense, and slightly tender on pressure. There was a small tumour at the right femoral arch, the long diameter of which corresponded with the arch. This tumour had never been observed before his ride to town on the 5th. It was not painful, nor was there any tumefaction of the integuments. I endeavoured to press the contents of the tumour into the cavity of the abdomen, but without success. During my stay he had his bowels freely moved by some purgative medicines, which he had previously taken, and expressed himself as considerably relieved, the tumour, however, remaining unaltered.

15th. Visited him again with his ordinary physician, upon a message, which induced me to believe that an operation would be necessary. We found him very comfortable, all distension and tenderness of the abdomen gone; pulse 80, regular; respiration normal; tumour very much as when I saw him before. We learned that after I left him on the 11th he remained very comfortable until the 13th, when he was a good deal swelled and tender in the abdomen, but no vomiting. This state was relieved by the administration of purgative enemata and castor oil; that on the afternoon of the 14th a recurrence of suffering took place, in consequence of which we were again summoned; but again the means advised had been sufficient to open the bowels and relieve him. Each of us made a protracted effort to reduce the tumour, but without being able to make any impression on it.

16th. Dr. Rawlings was called to him early in the morning, and found him suffering severely with tenseness and pain in the abdomen; indomitable constipation; no tenderness in the tumour; no nausea, so far from it that (doubting, perhaps, the correctness of our previous diagnosis) he gave him from 60 to 100 grains of ipecac. without producing any sickness at stomach.

17th. Visited him again and found him moribund; pulse imperceptible at the wrists, the femoral artery at the arch beating about as strongly as the radial of an ordinary man; considerable tumefaction and tenderness of the abdomen; no tenderness in the tumour; no tumefaction of the integuments; the tumour itself decidedly less than when I last examined it. Died at 4 A. M. of the 18th.

Seven hours after death examined the body as far as could be done with the consent of the friends. Present Drs. Rawlings and Sullivan. Several bluish spots on the thigh and abdomen. The tumour, I thought, smaller than on the previous day. Upon cutting down on the tumour it was found to consist of a small portion of omentum, (about the size of a nutmeg,) firmly compacted, and adherent to the hernial sac throughout, by apparently recent adhesions; no fluid in the sac. The colour, firmness and attachment to the sac were such as to convey distinctly to each of us at first sight, that it was an inflamed gland. The structure existed at the inner edge of the ligament. The omentum contained in the sac was not gangrenous; but the small intestines adhered to the omentum, the perito-

neum, and the contiguous convolutions to each other, and were extensively mortified.

Remarks.—Here we had a strangulated hernia followed by death; but was death caused by the strangulation? If so, (as I believe,) we had a continued recurrence of tightening and loosening of the stricture; an absence of marked pain of the strictured part; no stercoreaceous vomiting at any time; and none of moment of any kind. We had also the progress of diseases much greater in parts not implicated in the stricture, than in that portion of the omentum which was.

We had the tumour unaltered in its condition by the presence or absence of strangulation—at least such was the case if a soluble state of the bowels and absence of distension and pain in the abdomen depended on a relaxation of the stricture.

It is mentioned that on the 17th, the tumour was of less size than it was at either of my previous visits. Of this fact I am fully convinced, both because of my distinct recollection of the size, but principally because in my attempts at reduction, it so happened that after attempting to force the tumour, as it were, into the thigh, and changing the direction of pressure, it was at two or three different times thrown up partially over the lower edge of the arch, whereas at the time named, it could not be put into that position.

I do not know of any authority which would justify an operation at either time when I saw him; and yet I believe that a successful operation at the first or second visit would have saved his life.

I think an operation, undertaken during life, would have been both delicate and difficult. Although the integuments covering the tumour were in the most favourable condition, the omentum was so perfectly jammed into the sac, that it appeared impossible that any more could have been forced in; and the same stroke of the scalpel which opened the sac, would be very apt to enter the omentum: in which case the appearance of the stricture and the intimate adhesion to the sac would have been very likely to throw doubt upon the actual condition of things. Again it was utterly impossible to introduce the finger into the sac, beside the omentum, (even after breaking up the attachments,) so as to feel the stricturing part. This remark is made upon the supposition that the parts would have been found in the same condition as after death. I believe that the sac was larger on the 11th and 15th than at death; but it had the same round, hard, gland-like feeling every time I examined it, and therefore was probably well filled. I think, however, that the adhesions between the sac and its contents may not have existed on the 11th.

Case of Extensive Inflammation of the synovial membrane of the Knee Joint terminating in suppuration, without inducing ulceration of either the hard or soft textures of the Joint. By SAMUEL TYLER, M. D.

I was called on the 29th of October, 1844, to visit a patient 15 years of age, labouring, as it was then supposed, under a scrofulous affection of the knee-joint. Upon inquiry into the history of the case, I learned that some six months previous the patient had given the limb a severe twist, whilst running over rutty, uneven ground.

Finding the joint excessively swollen, the leg so contracted as to render it almost impossible to place the foot upon the ground by force, I proceeded to treat the case in the following manner:

Commencing with the application of a blister which surrounded the

joint, which was afterwards kept discharging by the use of warm poultices, I gave on each alternate day the favourite purgative of Dr. Physick, jalap and cream of tartar, in doses sufficient to procure free evacuations.

Under this treatment the general system improved somewhat, but the joint continued to swell, when on the 16th of November I made a free incision upon the inner side of the joint, evacuating at least one quart of pus. A continual discharge was kept up from this opening until the 29th of December, when I made use of "Chase apparatus" to overcome the contraction of the limb, which was perfectly effected in less than three weeks' time, leaving the patient with a limb perfectly straight, and entire mobility of the joint.

I consider the great peculiarity of this case to consist in the fact, that where there should be so excessive and long continued inflammation of the synovial membrane, that it should terminate without inducing ulceration either of the soft or hard textures of the joint.

DOMESTIC SUMMARY.

Survivorship.—Hugh Swinton Ball, with his wife and adopted daughter, were lost on board the steamer Pulaski, on the 14th of June, 1838. By his will, he bequeathed to his wife his household furniture, servants, &c., and in case he died without children he gave her all the property received by him in marriage, and other legacies out of his own estate. A claim was made by her heirs, on the ground that she had survived her husband.

Chancellor Johnston heard the cause at Charleston in January, 1839. In his opinion he first reviews the cases that have already come before various courts, and remarks that in all these "the English and American courts have hitherto carefully avoided the adoption of any rule of decision. The cases have gone off by compromise, or were decided upon a rule adapted to the nature of the question before the court, and not to the question of right as transmitted by survivorship;" or, in the words of Chancellor Kent, "The English law has hitherto waived the question." In proof of this he adduces the well-known cases of Gen. Stanwix and Selwyn, of *Taylor v. Diplock*, and *Wright v. Sarmuda*. Still Chancellor Johnston is not prepared to abandon as delusive all efforts to attain rules capable of deciding the fact of survivorship, even in instances deemed conjectural. But if there be any evidence whatever, even though it be but a shadow, it must govern in the decision of the fact. The *code civil* is indeed grounded on this. It provides that if several persons entitled to inherit from each other, happen to perish, without the possibility of knowing which died first, the presumption of survivorship is determined by the *circumstances of the fact*, and is only in default of these that rules are enacted, applicable to cases of a more conjectural character.

"In what I have said hitherto I have contemplated a case where the cause of death consisted of one disaster, whether of more rapid or of slower operation. But where the danger consisted of a series of successive operations, separated from each other, and each capable of inflicting death upon the victims according to the degree of exposure to it, there is certainly more scope for testimony and for inference, from circumstances, than in other cases."

The facts are thus stated by the chancellor.

"The Pulaski left Savannah on the 13th of June, 1838, and arrived at Charleston that evening. The next morning Mr. and Mrs. Ball, their adopted daughter and a servant, went on board, and she departed north on her course, until about 11 o'clock of that night when, most of the passengers having retired to their berths, the starboard boiler exploded. By the explosion an extensive breach was made on the starboard side of the vessel. Her main deck was blown off, thus destroying the communication between the forward and after part of the steamer. The forward part of the upper deck (called the hurricane deck, in contradistinction to

the after part, which is called the promenade deck) was blown off, carrying with it the wheel-house, in which the commander of the boat, Capt. Dubois, was sleeping at the time; the gentlemen's forward cabin was much torn, its floor ripped up and its bulk head driven in; and Major Twiggs, whose berth was there, gives us reason to suppose that many perished in that part of the vessel, by the explosion. The gentlemen's after cabin (which was under the main deck, and immediately beneath the ladies' cabin, which was on that deck) was also injured. Some part of the floor was ripped up, the bulk head partly driven in, and the stairs communicating with the deck more or less shattered. The vessel was careened to the larboard, and as she dipped began to fill with water. In a very short time the hold was filled, and the water gained to the level of the floor of the gentlemen's cabins. It rose higher with great rapidity; the vessel settled to the centre, where the breach was, and all hope that she could hold together was abandoned. She parted amidships, and the forward and after parts pitched into the water, towards the centre, at an angle of nearly thirty degrees. The gentlemen's after cabin was now entirely filled, and the forward cabin was certainly in as bad a condition. There were some persons on the forward part of the vessel, nearly all of whom speedily perished, but the greater number were in the after part, including one or two, who had passed by swimming from the forward to the after part. Of those on the after part, as many as could, climbed to the promenade deck; but there were many, mostly ladies, among whom was Mrs. Ball, who remained on the main deck. These, as that deck sunk deeper and deeper, retreated along the gangways, by the ladies' cabin, towards the stern. The promenade deck, by the action of the waves, was burst from the top of the boat, and was submerged with all that were on it. Whether the stern of the boat was submerged at, or after this time, is uncertain. Some of the witnesses think it was, even before the promenade deck, others that it was not submerged at all. All these events had taken place, according to most of the witnesses, in about from forty to fifty minutes; according to others, in less time.

"Some few escaped in the boats, others on parts of the wreck, and others on rafts constructed by them as they could. Of Mrs. Ball nothing is known, after the submerging of the promenade deck, nor for some time before. Before that event, her cries were heard by one witness, who had gained the promenade deck, as they proceeded from the place she still occupied on the deck below. No witness speaks of her afterwards.

"Within a few minutes after the explosion, according to one witness who knew her, she came out of the ladies' cabin, and began to call upon her husband. The scene was one of terror, as may be supposed; but although a crowd was instantly gathered at that part of the vessel, there was not much noise. The surrounding horrors seem to have subdued the sufferers, and in mute astonishment they contemplated the fate that awaited them. Even the wheels had stopped. Nothing but the sound of the waters, which were somewhat disturbed, and the hasty exclamations of friends, as they sought each other out, and the noise occasioned by such preparations as the more active and prudent felt themselves called upon to make for themselves and others under their charge, were heard. But the voice of Mrs. Ball was heard above all others, calling upon her husband. She ran forward to the chasm caused by the explosion, retraced her steps, and continued to traverse the starboard gangway in search of him, uttering his name in tones so elevated by her agony, that they reached most parts of the vessel, and seem to have made an indelible impression upon all who heard them. Her cry, according to one witness, was a cry of bitter despair and anxious inquiry, and, according to all, it was lifted in shrill tones, carrying an irresistible appeal to all hearts.

"Mr. Ball was neither seen nor heard. Mrs. Ball was heard and seen by many, but no response was heard to her cries, nor was any one seen to approach her, for her protection or consolation. Two witnesses, who knew Mrs. Ball, saw her but did not see him. One of them passed and repassed her, in a hurried manner, to be sure, but did not discover him.

"He was neither seen nor heard after the explosion, unless he was the person referred to by two witnesses, who state the following circumstance: Very shortly after the explosion, a boat was let down on the starboard side of the steamer, into which some persons descended. As the boat was lying below, a gentleman came

to that side of the deck, and throwing a coat into the boat, called to those in it to hold fast a moment and instantly disappeared. He never reappeared, but the next day, the coat was found to be a black dress coat of a large size (such was the size of Mr. Ball) and in one of the pockets was discovered a shirt collar, on which was written the name of Ball, with some initials, which the witnesses have forgotten.

"Now these are the circumstances of the case. It is not the case of an unknown calamity, nor of one withdrawn from observation, nor is it a case where the calamity was of instantaneous operation. It is a case for testimony and to be decided on testimony."

Chancellor Johnston proceeds to say, that as the right on the part of Mrs. Ball was derivative, the burden is on the plaintiffs, to prove that she was the survivor. But although bound to prove this, it does not follow that they are to prove it to demonstration. We must take the best evidence that the case affords.

Although unwilling to rest on the fact, that Mrs. Ball was the last person seen, yet he inclines to the opinion, that in cases of persons lost by a common accident, this should be the ground of decision. He prefers in the present instance, "to put the case upon the ground of probability, arising from the evidence; upon a belief engendered by a combination of the circumstances, and upon the superiority of positive proof over conjecture or even probability.

"The explosion produced its most fatal effects in the gentlemen's forward cabin, and that was the first part of the vessel which sunk. The after cabin was also much injured. From the forward cabin many persons never escaped. From the after cabin, so far as we know from the evidence, all did escape except Judge Cameron, an infirm old man. But from the description given of its condition, it is possible that some others may have been detained, either from being hurt or otherwise, until the cabin filled.

"It is *certain* that Mrs. Ball escaped the explosion. Is it certain that Mr. Ball did? Mr. Ball engaged a berth in the after cabin. The probability is that he got it, but this is far from certain. The boat came with many passengers from Savannah, which may have occasioned Mr. Ball to be displaced and transferred forward. I think, however, it is not probable he was so transferred, because by an arrangement between the agents in Savannah and at Charleston, they were entitled to let the berths, in alternate order, throughout the boat; and we know, that some of the passengers, who came from Savannah, had not the advantage of pre-occupying the after cabin, and that some of the Charleston passengers were let into the cabin; Mr. Ball, therefore, was probably in that cabin. But there is a probability that he was in the forward cabin, and if so, in the greatest danger from the explosion. Mrs. Ball was clear from that danger *certainly*, Mr. Ball only *probably*. Supposing that he was in the after cabin, still there are chances of his destruction there, from which, we know, Mrs. Ball was totally free. On the deck. We know Mrs. Ball was there. *This is certain*. Is it certain that Mr. Ball had hitherto escaped and was the person who threw the coat into the boat? It may be that he was the man. I think it hardly probable. I should have thought that he was the man, if he had been seen at any time near his wife, or had answered to her heart-rending calls. But it is more probable that some one else in the hurry of the moment may have mistaken Mr. Ball's coat for his own and thrown it into the boat, than that an affectionate husband and brave man, as Mr. Ball is proved to have been, should have heard such appeals as were made to him by his wife, and should at such a time, have failed in his duty to her.

"We have indubitable evidence that she had so far escaped; the same evidence with a moral force, which cannot be resisted, convinces us, that he must have already perished, or he would have been at her side. I have, from all these considerations, formed the opinion that Mrs. Ball survived her husband."

On appeal, (Feb. 1840,) the above decision was confirmed.

The reporter gives the argument of Col. Hunt, counsel for the appellants. The burden of this is, that the exact time of the death of Mrs. Ball is known. She was from her terror and feebleness undoubtedly drowned, when the decks sank. Mr. Ball may have survived for some time after. The great error (he objects,) on the other side, is the resort to negative testimony. He was not seen—he was not heard—therefore he was dead—although no cause of death is traced

to him. There is no proof that he was killed by the explosion. He was a good swimmer—he may have caught a fragment of the wreck and survived a long time. As to Mrs. Ball, this was impossible.

Col. Hunt considers it certain that Mr. Ball had a birth in the after cabin, from which all escaped except Judge Cameron. He is also decided in opinion that it was Mr. Ball who threw his coat into the boat; nor because he was not with his wife, does it prove that he was dead. He might have been seeking some means to save her; he might have been looking for his adopted daughter.

"There is no legal proof that Mr. Ball was dead at the time the witnesses heard the cries of his wife. No human testimony can fix the time of his death, while that of his wife is rendered almost certain. And thus, so far from the complainant's having established their survivorship, the weight of evidence proves that the husband survived. It is enough for us, that the fact is left unsettled. The burden of proof was upon the complainants, and they have failed to establish their position."—*Pell and another v. Ball's Executors.* Cheves' Cases in Chancery, (South Carolina,) vol. I.

T. R. B.

Recent Laws for the punishment of Criminal Abortion and Concealment of Birth.—The following law has just been passed in Massachusetts:—"Whoever maliciously, or without lawful justification, with intent to cause or procure the miscarriage of a woman, then pregnant with child, shall administer to her, prescribe for her, or advise or direct her to take or swallow any poison, drug, or medicine, or noxious thing; or shall cause or procure her, with like intent, to take or swallow any poison, drug, or medicine, or noxious thing; and whoever maliciously, and without lawful justification, shall use any instrument or means whatever, with the like intent, and any person, with the like intent, knowingly aiding and assisting such offender or offenders, shall be deemed guilty of felony, if the woman die in consequence thereof, and shall be imprisoned not more than twenty years, nor less than five years in the State Prison; and if the woman doth not die in consequence thereof, such offender shall be guilty of a misdemeanour, and shall be punished by imprisonment not exceeding seven years, nor less than one year in the State Prison, or House of Correction, or common jail, and by a fine not exceeding two thousand dollars."

The Legislature of the State of New York passed the following law on the 13th of May, 1845.

§ 1. Every person who shall administer to any person pregnant with a quick child, or prescribe for any such woman, or advise or procure any such woman to take any medicine, drug, or substance whatever, or shall use or employ any instrument or other means, with intent thereby to destroy such child, unless the same shall have been necessary to preserve the life of such mother, shall be deemed guilty of manslaughter in the second degree.

§ 2. Every person who shall administer to any pregnant woman, or prescribe for any such woman, or advise or procure any such woman to take any medicine, drug, substance or thing whatever, or shall use or employ any instruments or other means whatever, with intent thereby to procure the miscarriage of any such woman, shall, upon conviction, be punished by imprisonment in a county jail, not less than three months nor more than one year.

§ 3. Every woman who shall solicit of any person any medicine, drug, or substance, or thing whatever, and shall take the same, or shall submit to any operation, or other means whatever, with intent thereby to procure a miscarriage, shall be deemed guilty of a misdemeanour, and shall, upon conviction, be punished by imprisonment in the county jail, not less than three months nor more than one year, or by a fine not exceeding one thousand dollars, or by both such fine and imprisonment.

§ 4. Any woman who shall endeavour privately, either by herself or the procurement of others, to conceal the death of any issue of her body, which, if born alive would, by law be a bastard, whether it was born dead or alive, or whether it was murdered or not, shall be deemed guilty of a misdemeanour, and shall, on conviction thereof, be punished by imprisonment in a county jail not exceeding one year.

§ 5. Any woman who shall be convicted a second time of the offence specified

in the fourth section of this act, shall be punished by imprisonment in a state prison for a term not less than two or more than five years.

§ 6. Section nine, article first, title second of chapter one, of the fourth part of the Revised Statutes, and section twenty-one, title six, chapter one of the fourth part of the Revised Statutes, are hereby repealed.

The laws repealed by the last section are the following.

Every person who shall administer to any woman pregnant with a quick child, any medicine, drug, or substance whatever, or shall use or employ any instruments or other means, with intent thereby to destroy such child, unless the same shall have been necessary to preserve the life of such mother, or shall have been advised by two physicians to be necessary for such purpose, shall be guilty of manslaughter in the second degree.

Every person who shall wilfully administer to any pregnant woman, any medicine, drug, substance, or thing whatever, or shall use or employ any instrument or other means whatever, with intent thereby to procure the miscarriage of any such woman, unless the same shall have been necessary to preserve the life of such woman, or shall have been advised by two physicians to be necessary for that purpose, shall, upon conviction, be punished by imprisonment in a county jail not more than one year, or by a fine not exceeding five hundred dollars, or by both such fine and imprisonment."

I need hardly point out the superiority of the law in Massachusetts, to those who will take the trouble to compare the two enactments. The introduction, or rather the continuance of the distinction of *quick with child*, is supremely ridiculous, when we recollect, that we must prove this fact, by the mother, who is herself, in almost every case, a *particeps criminis*. Again, a premium is offered for committing the crime at a period when it is least dangerous to the mother, although the moral guilt is certainly as great in one case as in the other. It is no felony to destroy the ovum before the 4th or 5th month, and the punishment is only from three to twelve months' imprisonment in the county jail.

Far better are the broad provisions of the Massachusetts law. It is felony, if the mother's life be destroyed, and in all cases of abortion, no matter how soon after pregnancy, the offender *may* be reached with heavy punishments.

It will be observed that in the New York Act, the female soliciting and consenting, is made liable to punishment. This is certainly a salutary provision.

The enactment of the English code relative to the concealment of the death of an illegitimate child, is introduced for the first time, at least, in the State of New York.

T. R. B.

Report of the Surgeon General, U. S. Army.—The Surgeon General in this interesting document states, that "the number of officers and men remaining on the sick report on the 30th of September, 1843, was 726, and the number of cases of indisposition which have occurred since that period is 20,982—making in all, 21,708 cases that have been under medical treatment within the last twelve months.

"Of the whole number of sick, 20,760 have been restored to duty, 15 are on furlough, 208 have been discharged from the service, 9 have deserted, and 96 have died—leaving on the 30th of September, 620 still on the sick report.

"As the mean strength of the army for the last twelve months was, according to the monthly returns on file in the Adjutant General's office, about 8,600, and the number of cases of sickness reported by the medical officers during the same period was 20,982, with an aggregate loss by deaths of 96, it will appear that the proportion of cases of indisposition to the number of officers and men in service was as 2.44 to 1.—or that, on the average, each man was sick 2.44 times during the year; that the ratio of deaths to the number of men was as 1 to 89.58, or 1.04 per cent.; and the proportion of deaths to the number of cases treated as 1 to 226.12 or 0.44 per cent.

The medical officers of the army have also been engaged in a regular series of meteorological observations, and full reports have been received the past year from fifty-four military posts. Valuable results cannot fail to result to the science of meteorology, from these observations when they shall have extended over a sufficient period.

Aortitis.—Dr. GEO. N. BURWELL relates, in the *Buffalo Medical Journal*, (June, 1845,) the following interesting case of aortitis, which occurred in the Philadelphia Hospital, Blockley, during his residence there as resident physician.

Peter Stevens, black, aged sixty-three years, was brought to the hospital, late in the afternoon of February 13th, 1843. He was carried to his ward, not being able to walk. The physician who received him, said that he complained of intense pain in his chest, without being able to localize it; "it was all through it," to use his own expression. He felt his pulse, and found it nearly natural, both in frequency and strength. He had no fever. These observations were hurriedly made, however, and ought probably, to be received with some degree of allowance.

I first saw him about 8 o'clock in the evening; he was lying in his bed on his left side, his head bent forward, with his chin nearly touching his chest, gasping for breath, his lower jaw falling with every inspiration; at times his eyes would roll up, which, with the anxious yet relaxed state of his countenance, gave him a deathly appearance. His intelligence was perfectly good. He answered our questions with difficulty, and at times, they had to be repeated. We found that about three weeks before he was taken with symptoms of pleurisy of the left side, from which he had never entirely recovered; but had kept at his work as a common porter, and had been thus employed all the day previous. At one o'clock in the morning of the 13th, he had been thus attacked suddenly, and while in bed. The pain in his chest, above spoken of, constituted his greatest misery. An order for admittance to the hospital, was obtained for him during the forenoon, and he was brought in, in the afternoon, without having received any medical assistance.

A bowel complaint in the meantime had come on, which obliged him to get up to stool every fifteen or twenty minutes, the discharge being thin, and passed with much straining. He found the position on the left side with his head low, the most comfortable one, although, from his difficulty of breathing, it would have been supposed he would have been easiest sitting up. He could not lie on his back without aggravation of his sufferings. The nurse informed me that from the time of his entrance, he complained of great distress across the upper portion of the sternum. Not much was said to him, as he disliked being talked to. On examining his chest, as well as I could without adding to his pain, I found on the left side almost total flatness on percussion, from the second rib to the base of the chest, and to the left axilla; the flatness did not extend much to the right of the sternum. Percussion of the right side of the chest, and over the left lung, posteriorly, resonant. The respiratory murmur could be heard clear at the apex of the left lung, and throughout the right lung. No murmur heard over the lower lobe, posteriorly, where the percussion was clear; between the second and fourth ribs of the left side anteriorly, there was bronchial respiration, although not very loud.

The sounds of the heart could nowhere be heard, nor could its impulsion be felt. His pulse was scarcely perceptible, it was so small and feeble; it could not be felt in the left wrist when he lay upon his left side. Its frequency was about 110 beats in a minute.

No diagnosis was made out. The symptoms of any of the common diseases of the chest were not well enough marked, to found upon them a definite opinion. He died in two or three hours after I left him.

Post-mortem, thirty-eight hours after death.—The body was that of a large powerful negro, full six feet and two to four inches high, and not at all emaciated; some froth on the lips; blood ran from the nose on turning the body over; face somewhat bloated. Pleuritic adhesions of pleurae of both lungs, which were of some standing, yet easily broken; lungs congested, but crepitant. Heart hypertrophied and dilated, but the relative size of the cavities not lost; slight thickening of the aortic valves. On cutting into the aorta, its internal coat was found to be of a bright scarlet colour, which extended throughout the whole length of the vessel, and down the femoral arteries until they became popliteal; the injection, also, extended into the carotid, subclavian, and celiac arteries. The other arteries not examined. A piece cut from the middle portion of the humeral artery, did not exhibit this redness. The arteries which were inflamed, were empty, except a small clot near the aortic valves. The endocardium was not affected; dark, slightly

coagulated clots occupied the cavities of the heart, and extended into the pulmonary artery, the inner coat of which was also reddened, but not near to the extent of that of the aorta, and of a duller colour. The inflamed membrane was not thickened nor was any fibrous effusion noticed. In the cellular tissue under it, were noticed small spots or flakes, of what appeared to be ætheromatous deposit, which was found quite thickly deposited in the entire length of the aorta. The venæ cavæ had blood in them, and the lining membrane was very lightly tinged of a dark reddish-brown colour, evidently the result of imbibition merely. There was an ounce of dark bloody fluid in the pericardium and about the same quantity in the left pleuræ. The mucous membrane of the stomach was slightly inflamed in two or three places. Other organs of abdomen healthy. Brain not examined.

On reading the above, the first question that will arise, will, probably, be whether this was really a case of inflammation, or merely one of cadaveric strain? A great deal has been written on this point, and in deciding upon the true pathology of the case, it is an important one. There is no doubt in my mind as to the inflammatory nature of the redness. The marked difference between the bright colour of the aorta, and the sombre stain of the pulmonary artery, the still fainter colour of the venæ cavæ, and the healthy state of the endocardium, all of which had either fluid or clotted blood in contact with their lining membrane, demonstrate this point conclusively. There are only two facts which afford the least reason to doubt this, viz.: the fluid state of the blood, and the length of time which intervened between death and the post-mortem examination.

The case is interesting from its being one of the most rapidly fatal cases of arteritis on record. A strong man, healthy, with the exception of some pain in his side for two or three weeks, which was not severe enough to confine him to the house, after an ordinary day's work, is awakened suddenly in the night with severe pain all through his chest, which lasts without intermission, till his death, about twenty-two hours from the first accession of pain. Did the inflammation exist before the pain was felt? I know no way of determining this; probably not, in its acute form, at least. What connection was there between the inflammation and the little, opaque, cream-coloured deposits, noticed so thickly beneath the inner membrane? Their consistence would indicate in them a greater age than the inflammation had, but it does not follow that, of course, they were the exciting cause of the inflammation. This point must remain undecided.

The next question that arises, is, what is the connection between the inflammation and the agonizing pain suffered by the patient? Was it angina-pectoris? If so, the case would go far in support of Dr. Corrigan's opinion, that "inflammation of the lining membrane of the mouth of the aorta, is capable of producing the group of symptoms to which we give the name of angina-pectoris, and is, therefore, entitled to a place in the list of the causes of that affection."* It does not appear in the notes that he had pain in the left arm, and I do not recollect of asking him the question. If I did not, he would not have complained of it, for such was his distress, that he complained to me of nothing, and appeared as though he wished to be left alone to die. Besides, he did not die the sudden death of those who die of angina-pectoris.

The case is of high interest in a pathological point of view, and perhaps, also, in a legal sense. Therapeutically considered, it is not of much value, at least, after I saw him, for he was then dying beyond the reach of medicine.

Before closing this article, it may be well to take a glance at the varieties of acute arteritis. There appear to be three forms of it. The *first*, and most common variety, is that occurring with endocarditis, where the inflammation extends into the aorta, more or less. This cannot well be distinguished from the endocarditis, nor is it important that it should be. It is, merely, an aggravated and extended form of this inflammation, and as such, renders the prognosis more grave without materially altering the treatment. This variety, also, sometimes complicates cases of pericarditis, and of pleuro-pneumonia.

The *second* variety is seated in the extremities, and far more frequently attacks

* For an abstract of Dr. Corrigan's paper, see Amer. Med. Journ., old series, vol. 22, p. 467.

the legs, than the arms. It may be primary, or secondary; as when it supervenes upon amputation, or upon a diseased state of the coats of the arteries of the limbs. Reported cases of it may be found scattered through the different medical journals. Dupuytren, in his Surgical Lectures, gives two cases. It has often probably been confounded with phlebitis, but may be distinguished from it by two signs; 1st, the reduction, in arteritis, of the temperature of the limb, and 2d, by the occurrence of gangrene. Arteritis would seem to lead to gangrene, while phlebitis gives rise to œdema. This variety having commenced in the limbs, is not always confined to them, but may travel gradually, to the aorta, and on to the heart.

The third and rarest form of the disease, is seen in those cases where the inflammation first attacks the aorta, extends to its branches, and perhaps, also, to the endocardium. The case I have given belongs to this class. It is not as yet susceptible of positive diagnosis, but where the patient survives a number of days, it might be guessed at by the negative evidence of exclusion, with more or less certainty, according to the skill, tact and experience of the physician.

Twins, at different stages of development.—By H. N. LOOMIS, M. D. On the 13th April, 1839, I attended Mrs. H. in her third confinement, who was delivered of a full-sized healthy, female child, after a labour of about six hours continuance. The after-birth was expelled in a few minutes after the birth of the child, and with it came away a male fetus, measuring 4 1-8 inches in length, in a perfect state of preservation. It was flattened to about one-third of an inch in thickness, with the limbs flexed, and fairly imbedded in the sides of the body. When discovered in the vagina, and removed, (which was just before the placenta came away,) it was apparently free from any connection with the placenta. Some traces of a greatly attenuated cord were, however, visible on inspection.

My explanation of the above is, that the case was primarily a twin conception, and that the immature fetus either died at a period corresponding to its development, or, from some cause, its vitality was reduced to so low a grade as barely to continue, without being sufficient for its farther development.

In connection with the above, I will also mention the case of Mrs. T., whom I attended 1st Oct., 1841. This was her first pregnancy, and after a labour of 12 hours she was delivered of two dead boys. One presented the appearances of a fetus at the fifth month, with the surface pale, and somewhat shriveled, but in a state of perfect soundness; the other, corresponding in all respects with the date of her pregnancy, which she supposed to have approached to near the eighth month. This last was fat, of rather large size, and had evidently died quite recently. Blood was extravasated the entire length of the cord, and over a considerable portion of the abdomen surrounding the navel, otherwise the surface was natural.—*Buffalo Med. Journ.*, June, 1845.

Case of Procidentia Uteri during Labour, in which artificial means were necessary to effect delivery, with subsequent replacement of the uterus and complete recovery.—The following interesting case communicated by Dr. RAYMOND HARRIS, of Bryan Co., Georgia, to Dr. J. M. B. Harden, of Liberty Co., Georgia, is published in the *Southern Medical and Surgical Journal*, for May last. Cases of a similar character will be found in the No. of this Journal for July, 1844, p. 257, and January, 1845, p. 232.

"In April, 1829, a negro woman belonging to Capt. George Rentz, of McIntosh county, was taken in labour.—She was about 40 years of age, of good constitution, mother of several children, and so far as is known, not subject to any previous prolapsus or other disease of the womb. Something unusual and anomalous having occurred during the progress of the labour, Dr. Harris was sent for. He found her, on his arrival, in the following condition:—She was lying on her back, with the whole gravid uterus between her thighs, retained only by the ligaments, which were much stretched but not ruptured, and discharging from its external surface a serous or sanious fluid. The woman had been in this condition for about 24 hours. She had had no pain since the descent of the uterus, and was complaining of none at this time. The liquor amnii had been discharged. After a careful examination, no motion or other sign of life in the fetus could be perceived. The uterus appeared to be in a perfectly quiescent state, without any disposition to contract. The os tincæ was barely dilated sufficiently to allow the

introduction of *two fingers*. Finding it absolutely necessary to relieve her as soon as possible, the Doctor proceeded to deliver her by artificial means—he opened the head of the child with a suitable instrument, and then, having an assistant to hold and support the uterus, he introduced his hand, and by careful *traction*, succeeded in removing its contents. There was very little pain during his manipulations. He now returned the womb, which had scarcely contracted at all, and advising the recumbent position, left her. She had a *very good "getting up,"* and two years ago the Doctor learned, *was in good health.*

Wound of the Axillary Artery and Plexus of Nerves.—Amputation below the shoulder joint.—Secondary hemorrhage.—Ligation of Subclavian Artery. By ALFRED C. POST, M. D., Surgeon to New York Hospital.—(*New York Journal of Medicine and the Collateral Sciences*, March, 1845.)—A rope-maker, of good constitution, 37 years of age, on the 15th Nov., 1843, while cutting hemp with a large and sharp instrument resembling a scythe, wounded his right arm in the axilla, making a transverse incision which divided all the soft parts down to the bone, and of course dividing the axillary artery and vein and the brachial plexus of nerves. Dr. Cox, of Williamsburg, Long Island, who was fortunately in the vicinity, secured the axillary artery with a ligature, within a few minutes after the accident happened, but not until a large quantity of blood had been lost. On the following morning the patient was conveyed to the New York Hospital. The limb at this time was exceedingly swollen and cold, and the symptoms of incipient gangrene were so manifest, that at a consultation of the surgeons in the hospital, it was unanimously agreed that immediate amputation should be resorted to. Dr. P. accordingly removed the arm, by a double flap operation, about two inches below the head of the bone. The axillary artery being denuded for some distance above the ligature, which had been previously applied, he placed a second ligature around it three quarters of an inch higher up. The parts incised were found to be somewhat infiltrated with blood. The edges of the wound were brought together, and secured in the usual manner by sutures and strips of adhesive plaster. Union did not occur by the first intention, but free suppuration was established within 48 hours after the operation. Tonics and generous diet were administered, and every thing went on favourably until the 30th November, about half an hour after midnight, when he was awakened from his sleep by a feeling of pain in the stump, and the trickling of a warm fluid. The ligature had come away a day or two before. Dr. Post saw the patient soon after and summoned a consultation. The dressings were removed and the stump examined; there was no return of the hemorrhage, and the vessel from which it had proceeded was not to be seen. It was agreed that the wound should be left open, being merely covered with lint, which was directed to be kept constantly wet with cold water. The patient was watched for several days by a succession of medical students, who were directed to compress the subclavian artery against the first rib, if the hemorrhage should return. There was no further bleeding until the 6th December, about midday, when a profuse arterial hemorrhage occurred suddenly and without warning. The quantity of blood which was lost amounted to at least a pint: it had soaked through the matress upon which he was lying, and formed a puddle upon the floor. Dr. P. was in an adjoining room, and was immediately sent for; on his arrival he compressed the subclavian artery against the first rib, and in this manner restrained the hemorrhage, but not without considerable force. Doctor Watson, who was at the time in the hospital, was sent for, and compressed the artery below the clavicle, while Dr. P. proceeded to perform the operation of securing the vessel, where it emerges from between the scaleni muscles. During the operation, a slight wound was inflicted upon the external jugular vein, and a bubble or two of air entered with an audible gurgling sound: the further entrance of air was promptly arrested by the application of Dr. Watson's finger upon the wounded vein. A ligature was applied to the supra-scapular artery, which presented itself in the wound: this vessel being drawn aside, Dr. P. could feel the pulsation of the subclavian artery where it crosses the first rib. Dr. P. then denuded the artery of the fascia and cellular tissue covering it, and without any difficulty passed a ligature under it by means of Sir Philip Crampston's admirable needle. Before tightening the ligature, the artery was distinctly

seen pulsating over it, by Dr. Watson and the students who were present. After securing the artery, a firm compress of lint was applied over the wound of the jugular vein, and the edges of the cutaneous incision were brought together by means of sutures and adhesive plaster. After the operation, the patient appeared very much exhausted; but he gradually rallied under the influence of stimulants and tonics. Suppuration was freely established within a few days, and the compress of lint, which had been left within the wound, was discharged with the matter. The ligature, which had been applied to the subclavian artery, came away on the 2d January, 1844, 27 days after it had been applied. The following report was made on the 19th January. The wound on the clavicle is slowly contracting and healing at the edges. The stump is nearly healed; but a portion of the extremity of the bone is denuded, being overlapped by fungous granulations, and it will, no doubt, exfoliate. The patient is still taking tonics: his appetite is good, and his general condition much improved.

On the 9th April, he left the hospital in good health, the wound over the clavicle being healed with the exception of a point not much larger than a pin's head. The stump was very nearly healed, there being no longer any exposed bone.

Statistics of the Medical Colleges of the United States.—The following table exhibits the number of students and graduates in most of the Medical Colleges in the United States for the session 1844-5. We have to regret that it is not complete, but hope the proper authorities will furnish us the information to render it so.

Medical Schools.	Students.	Graduates.
University of Pennsylvania,	446	164
College of Physicians and Surgeons, N. Y.	193	37
Harvard University, Boston	157	19
Transylvania University, Lexington	156	38
Medical College of the State of S. Carolina		74
Jefferson Medical College	409	116
Medical College of Ohio	210	47
Medical Institution of Yale College		11
Medical Institute of Louisville	286	71
Cleveland Medical College	109	
Albany Medical College	104	19
University of Maryland	103	43
University of the City of New York	378	97
Medical College of Georgia		33
Geneva Medical College	183	41
St. Louis University		14
Pennsylvania College	60	14
Berkshire Medical Institution	145	
Willoughby University	120	6
Laporte University	45	
Castleton Medical College		21
Louisiana Medical College	93	
Kemper Medical College, St. Louis		16
Vermont Medical College		25

Guthrie on the Anatomy and Diseases of the Urinary Organs.—This very instructive and practical work, which has gone through three editions in London, has lately been republished by Messrs. Lea & Blanchard.

Copland's Dictionary of Practical Medicine.—We are happy to announce that the American edition of this work, issued by Harper & Brothers, and edited by Dr. Lee, is advancing rapidly, the ninth No., completing the first volume, having been published. The editor continues to execute his task with great industry and ability; his additions are numerous and valuable.

We wish that we could give an equally satisfactory account of the progress of the original work, but we have to state that although upwards of eighteen months have elapsed since the publication of the ninth part of the London edition, which completes the second volume, the tenth has not yet appeared.



Fig. 110.

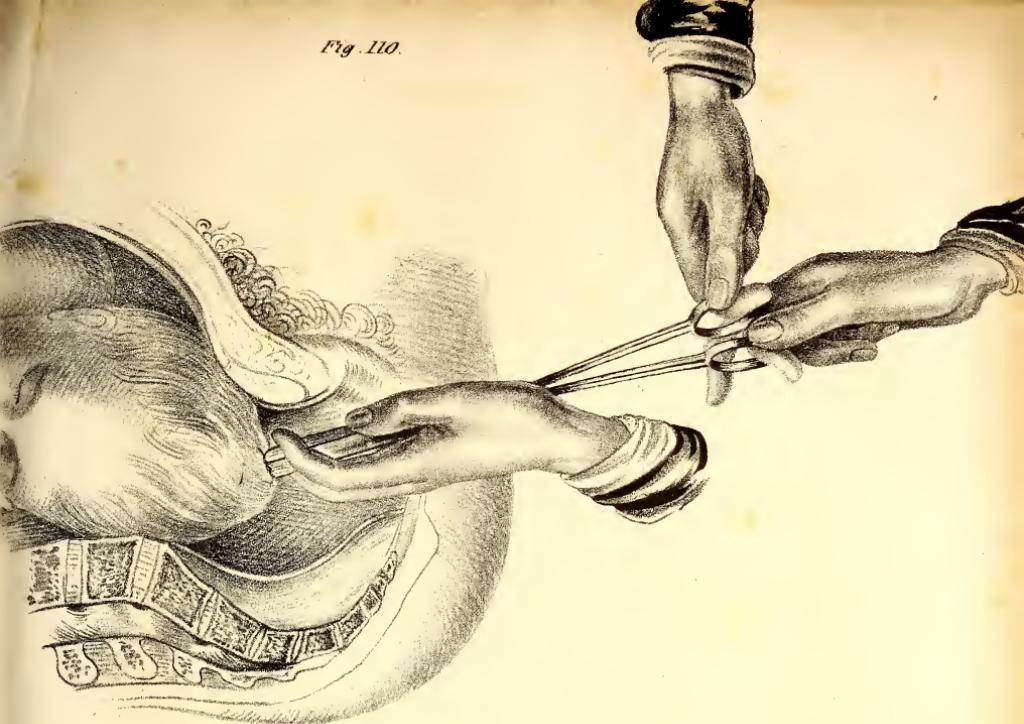


Fig. 109!

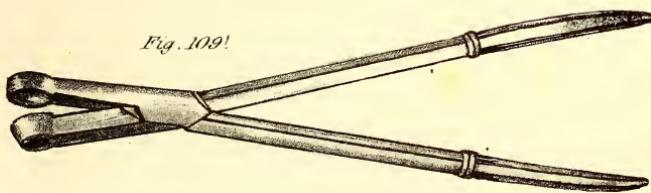
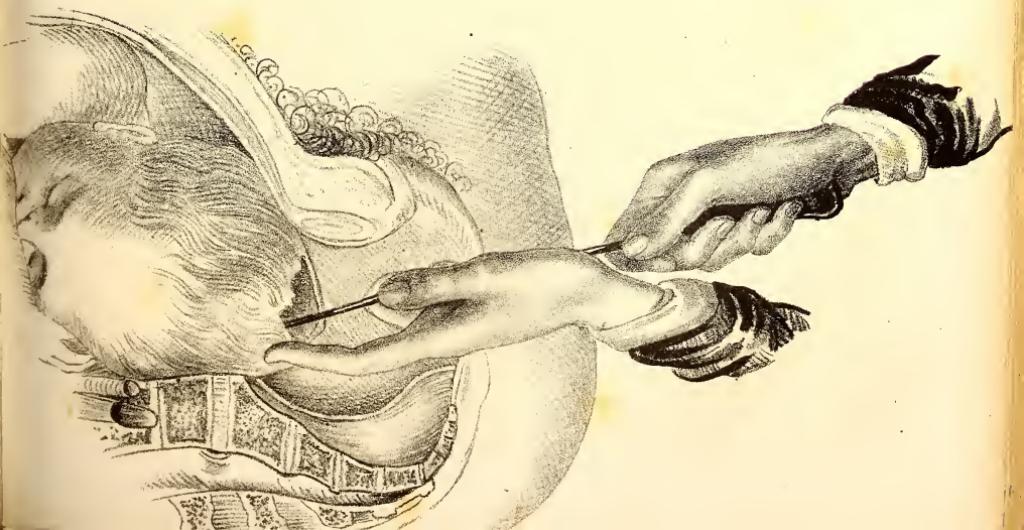
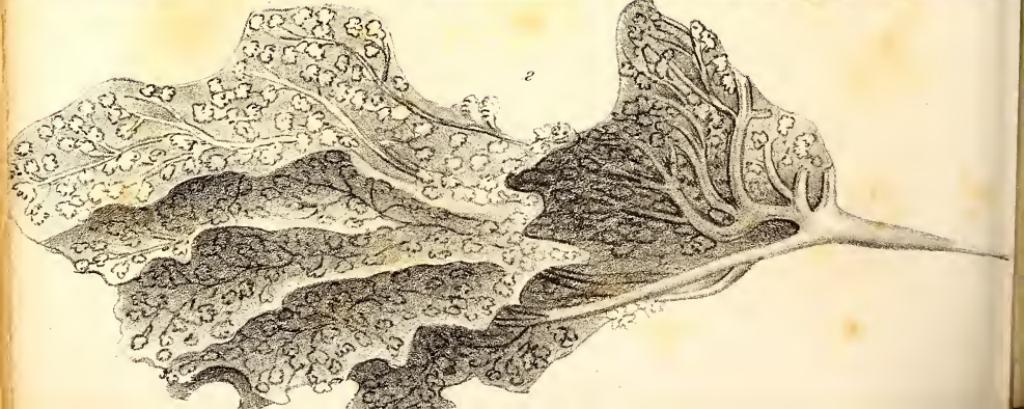
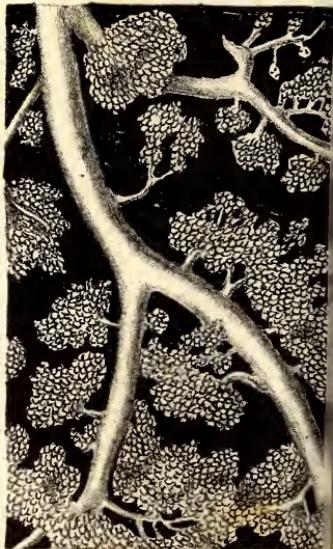
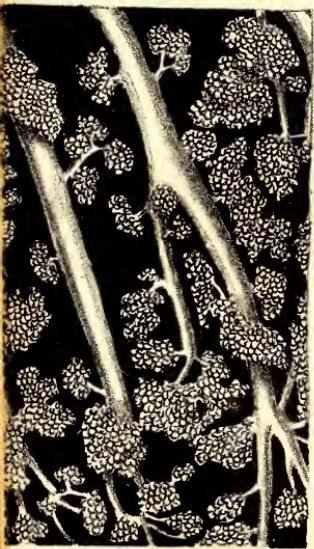
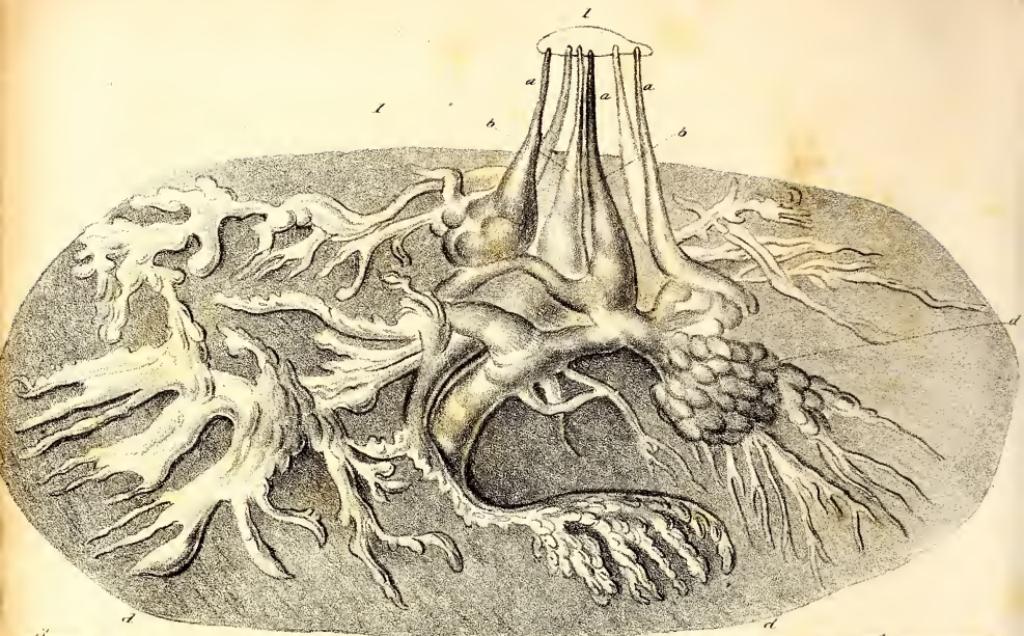


Fig. III.







THE
AMERICAN JOURNAL
OF THE
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- EDITOR—ISAAC HAYS, M. D., one of the Surgeons to Wills Hospital for the Blind and Lame, &c.

TO READERS AND CORRESPONDENTS.

WE have received from Prof. Horner a description of the odoriferous glands of the negro, with a drawing, which shall appear in our next number.

We have also received communications from Drs. J. B. S. Jackson, Jno. A. Lockwood, J. M. Sims, J. F. Peebles, and H. Fountain, which shall receive early attention.

It is not consistent with the plan of this Journal to publish anonymous communications: the authors of several such sent to us will therefore understand why they have not appeared.

The following works have been received:—

Lectures on the Principles and Practice of Physic; delivered at King's College, London. By THOMAS WATSON, M. D., F. R. C. P., &c. Second American from the second London edition. Revised, with additions, by D. FRANCIS CONDIE, M. D., Sec. Ph. Col. Phys., &c. Philadelphia, Lea & Blanchard, 1845. (From the publishers.)

The Principles and Practice of Obstetric Medicine and Surgery, in reference to the process of Parturition. Illustrated by one hundred and forty-eight Figures. By FRANCIS H. RAMSBOTHAM, M. D., F. R. C. P.; Lecturer on Obstetric and Forensic Medicine at the London Hospital, &c. &c. &c. A new edition, from the enlarged and revised London edition. Philadelphia, Lea & Blanchard, 1845. (From the publishers.)

The Anatomy and Diseases of the Breast. With numerous Plates. By SIR ASTLEY COOPER, Bart., F. R. S., &c. &c. &c. To which are added his various surgical papers, now first published in a collected form. Philadelphia, Lea & Blanchard, 1845. (From the publishers.)

The Dispensatory of the United States of America. By GEORGE B. WOOD, M. D., Prof. Materia Medica & Pharmacy in the University of Pennsylvania, and FRANKLIN BACHE, M. D., Prof. of Chem. in Jeff. Med. Coll., &c. Sixth edition, carefully revised. Philadelphia, Grigg & Elliott, 1845. (From the publishers.)

Modern Cookery in all its Branches: Reduced to a System of easy Practice, for the use of Private Families. In a series of Receipts, which have been strictly tested, and are given with the most minute exactness. By ELIZA ACTON. Illustrated with numerous Wood-cuts. To which are added directions for carving, garnishing, and setting out the table, with a table of weights and measures. The whole revised and prepared for American Housekeepers, by MRS. S. J. HALE. From the second London edition. Philadelphia, Lea & Blanchard, 1845. (From the publishers.)

Percussion und Auscultation des Herzens im gesunden und kranken Zustande. Von Liberal Günzburg, D. M. und C., &c. 2d ed. Wien, 1844. (From Dr. Oppenheim.)

Norme austriache attorno ai pubblici impiegati di sanità. Opera di Giuseppe Francesco Dr. Müller. Medico provinciale a Praga. Praga, 1843. (From Dr. Oppenheim.)

Beiträge zur Medizin, Chirurgie und Ophthalmologie. Von Chr. Conr. Wuth, D. M. C., et artis Obstetricæ, &c. Berlin, 1844. (From Dr. Oppenheim.)

Schönleins Klinische Vorträge in dem Charité—Krankanhouse zu Berlin, kritisch beleuchtet von Dr. F. Pauli. Landau, 1844. (From Dr. Oppenheim.)

De tenotomia talipedibus applicata commentatio. Chr. Weis. Hafniæ, 1844. (From Dr. Oppenheim.)

'Rectum Scirrhosum exstirpandum est. A. F. Danzel, M. C., A. O. Dr. Gottingae, 1844.

Outlines of the Arteries, with short Descriptions. Designed for the use of Medical Students. By JOHN NEILL, A. M., M. D. Prosector in the University of Pennsylvania, Phys. to Wills' Hospital, &c. &c. Philadelphia, Barrington & Haswell, 1845. (From the author.)

An Essay on the Treatment of Compound and Complicated Fractures, being the Annual Address before the Massachusetts Medical Society, May 28, 1845. By WM. J. WALKER, M. D., Fellow of the Society. Boston, 1845. (From the author.)

The Remembrancer, or Book of Emergencies; in which are concisely pointed out the immediate remedies to be adopted in the first moments of danger from Poisoning, Drowning, Apoplexy, Burns, and other accidents; with the tests for the principal poisons, and other useful information. By EDWARD B. L. SHAW, M. R. C. S., & L. A. S., &c. &c. &c. Revised and improved by an American Physician. New York, Sam. S. & W. Wood, 1845. (From the publishers.)

Reports of the Trustees, Steward, and Treasurer, and Superintendent of the Insane Hospital, Maine, 1844. Augusta, 1845. (From Dr. J. Ray.)

Harvard University. Catalogue of Students attending Medical Lectures in Boston, 1844–45, with a circular of the Faculty. Boston, 1845. (From the Faculty.)

Catalogue of the Officers and Students of the Medical Department of Hampden, Sidney College, in Richmond, Va. Session 1844–45. Richmond, 1845. (From the Faculty.)

Catalogue of the Trustees, Faculty, and Students of the Medical College of South Carolina. Charleston, 1845.

Report of the Medical Department of the University of Pennsylvania for the year 1845, to the Alumni of the School, by the Medical Faculty. Philadelphia, 1845. (From the Faculty.)

Annual Announcement of the Willoughby Medical College. Session 1845–6.

Third Annual Announcement and Catalogue of the Rush Medical College. Chicago, Il. Chichago, 1845.

Elementary Chemistry, Theoretical and Practical. By GEO. FOWNES, PH. D., Chemical Lecturer in the Middlesex School, and to the Pharmaceutical Society of Great Britain. With numerous illustrations. Edited, with additions, by ROBT. BRIDGES, M. D., Prof. Gen. & Pharm. Chem. in Philad., Coll. of Pharmacy, &c. &c. Philadelphia, Lea & Blanchard, 1845. (From the publishers.)

The use of the Blow-pipe in Chemistry and Mineralogy. By J. J. BERZELIUS. Translated from the fourth enlarged and corrected edition. By J. D. WHITNEY. Boston, W. D. Ticknor, &c., 1815. (From the Translator.)

An Elementary Treatise on Midwifery. By ALF. A. L. M. VELPEAU, M. D., &c. Translated from the French by CHARLES D. MEIGS, M. D., &c. Third American edition, with notes and additions, by WM. HARRIS, M. D., Lecturer on Midwifery, &c. Philadelphia, Lindsay & Blakiston, 1845. (From the publishers.)

De l'emprisonnement individual sous le rapport sanitaire et des attaques dirigées contre lui par MM. Charles Lucas et Léon Faucher, à l'occasion du projet de loi sur la réforme des prisons présenté par le gouvernement. Par George Varren-

trapp, Medecin de l'hôpital de St. Esprit à Francfort sur Mein, &c. &c. Paris, 1844. (From the author.)

Observationes Anatomicæ de parte cephalica nervi sympathici ejusque conjunctionibus cum nervis cerebralibus. J. G. VARRENTTRAPP. Francfort, 1831. (From the author.)

A Practical Treatise on the Diseases of Children. By JAMES STEWART, M. D., A. M., &c. &c. &c. Third edition, carefully revised and enlarged. New York, Harper & Brothers, 1845. (From the publishers.)

Thoughts on the Connection of Life, Mind, and Matter, in respect to Education. By J. P. BATCHELDER, M. D. Utica, 1845. (From the author.)

A Treatise on Diseases of the Sexual Organs: adapted to Popular and Professional Reading, and the Expositions of Quackery, Professional and otherwise. By EDW. H. DIXON, M. D., &c. New York, Burgess, Stringer & Co., 1845. (From the publishers.)

Revue Médicale Française et Etrangère. Par J. B. Cayol, ancien Prof. de Chirurgie, &c. Jan., Feb., March, April, May, 1845. (In exchange.)

Gazette Médicale de Paris, Nos. 3, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, for 1845. (In exchange.)

Annales de Thérapeutique Médicale et Chirurgicale et de Toxicologie. Par M. le Docteur Rognetta. Feb., March, April, May, and June, 1845. (In exchange.)

Journal de Médecine et de Chirurgie pratique. Par Lucas-Championniere, M. D. P., Feb., March, April, May, June, 1845. (In exchange.)

Journal des Connaissances Médico-Chirurgicales. Par J. Lebaudy, H. Gouraud, Martin-Lauzer. Feb., March, April, May, June, 1845. (In exchange.)

Journal de Médecine. Par M. Troussseau. June, July, 1845. (In exchange.)

Journal de Chirurgie. Par M. Malgaigne. June, July, 1845. (In exchange.)

Annales Médico-Psychologiques. Journal de l'Anatomie, de la Physiologie, et de la Pathologie du Système Nerveux. Par MM. les Docteurs Baillarger, Cerisse, et Longet. March, May, 1845. (In exchange.)

Journal de Pharmacie et de Chimie. Feb., March, April, 1845. (In exchange.)

Zeitschrift für die gesammte Medicin. Herausgegeben von F. W. Oppenheim. Oct., Nov., Dec., 1844. Jan., Feb., March, April, May, 1845. (In exchange.)

Adolph Henke's *Zeitschrift für die Staatsärzneikunde fortgesetzt*, von Dr. F. J. Siebenhaar. Erlangen, 1844. Heft 1, 2.

Adolph Henke's *Zeitschrift für die Staatsärzneikunde fortgesetzt* von Dr. A. Siebert. Erlangen, 1844. Heft 3 & 4, 1845. Heft 1 & 2. (In exchange.)

Magazin für die Staatsärzneikunde. Von Dr. F. J. Siebenhaar und Dr. R. J. A. Martini. Leipzig, 1844. Bd. iii. Heft 2. (In exchange.)

The Edinburgh Medical and Surgical Journal. July, 1845. (In exchange.)

The British and Foreign Medical Review. July, 1845. (In exchange.)

The Medico-Chirurgical Review. July, 1845. (In exchange.)

The Northern Journal of Medicine. June, July, and August, 1845. (In exchange.)

The London Medical Gazette. June, July, and August, 1845. (In exchange.)

The Provincial Medical and Surgical Journal. July, August, and September, 1845. (In exchange.)

The Medical Times. July, August, and Sept., 1845. (In exchange.)

Dublin Medical Press. June, July, and August, 1845. (In exchange.)

The London and Edinburgh Monthly Journal of Medical Science. June, July, August, 1845. (In exchange.)

The Half-Yearly Abstract of the Medical Sciences; being a Practical and Analytical Digest of the Contents of the principal British and Continental Medical Works published in the preceding six months. Together with a series of critical reports on the progress of Medicine and the Collateral Sciences during the same period. Edited by W. H. RANKING, M. D. Cantab. Phys. to the Suffolk General Hospital. Vol. I. Jan.—June, 1845. London, 1845. (In exchange.)

The same, republished by J. & W. G. Langley, New York.

The Retrospect of Practical Medicine and Surgery, being a half-yearly Journal, containing a retrospective review of every Discovery and Practical Improvement in the Medical Sciences. Edited by W. BRAITHWAITE, Surgeon to the Leeds General Eye and Ear Infirmary, &c. &c. Jan., June, 1845. London. (In exchange.)

The Buffalo Medical Journal, July, August, Sept., 1845. (In exchange.)

The Illinois Medical and Surgical Journal, May, June, and August, 1845. (In exchange.)

The Bulletin of Medical Sciencee, July, August, and Sept., 1846. (In exchange.)

Select Medical Library. (Colles' Surgical Lectures.) July, 1845. (In exchange.)

The Medical Examiner. July, August, and Sept., 1845. (In exchange.)

Southern Medical and Surgical Journal, July, August, and Sept., 1845. (In exchange.)

The New York Journal of Medicine and the Collateral Sciences. July and Sept., 1845. (In exchange.)

The American Journal of Pharmacy, published by authority of the Philadelphia College of Pharmacy. July, 1845. (In exchange.)

The Western Journal of Medicine and Surgery. July, August, Sept., 1845. (In exchange.)

The American Journal and Library of Dental Science. June, 1845. (In exchange.)

St. Louis Medical and Surgical Journal, July, Aug., Sept., 1845. (In exchange.)

The American Journal of Science and Arts. July, 1845. (In exchange.)

The New Orleans Medical Journal, July, Sept., 1845. (In exchange.)

The American Journal of Insanity, July, 1845. (In exchange.)

The British American Journal of Medical and Physical Science, June, July, August, 1845. (In exchange.)

The Pennsylvania Journal of Prison Discipline and Philanthropy, July, 1845. (In exchange.)

The Western Lancet, April, July, and August, 1845. (In exchange.)

New York Medical Intelligencer and Eclectic Gazette. Vol. I. No. 1. (In exchange.)

The American Journal and Library of Dental Science. Sept., 1845. (In exchange.)

Communications intended for publication, and Books for Review, should be sent, *free of expense*, directed to ISAAC HAYS, M. D., Editor of the Amer. Journ. of Med. Sci., care of Messrs. Lea & Blanchard, Philadelphia. Parcels directed as above and sent (carriage paid) under cover, to John Miller, Henrietta Street, Covent Garden, *London*; or to Wiley & Putnam, *New York*; or W. D. Ticknor, *Boston*; or M. Hector Bossange, Lib. quai Voltaire, No. 11, *Paris*, will reach us safely. We particularly request the attention of our foreign correspondents to the above, as we are often subjected to unnecessary expense for postage and carriage.

All remittances of money, and letters on the *business* of the Journal, should be addressed *exclusively* to the publishers, Messrs. Lea & Blanchard.

 The advertisement-sheet belongs to the business department of the Journal, and all communications for it should be made to the publishers, under whose exclusive control it is.

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THE
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MEDICAL SCIENCES
FOR OCTOBER, 1845.

ART. I.—*The Knee-joint Anchylosed at a right angle—Restored nearly to a straight position after the excision of a wedge-shaped portion of bone, consisting of the patella, condyles and articular surface of the Tibia.* By GURDON BUCK, M. D., one of the Surgeons to the New York Hospital. [With three wood cuts.]

WILLIAM KEITH, a farmer, of healthy and robust constitution, aged 22 years, born in Canada, was admitted September 12th, 1844, into ward No. 7, north building, New York Hospital, with the right knee anchylosed at a right angle, in consequence of violent inflammation and suppuration of the joint, produced by a wound inflicted seven years previous with an axe, that had grazed the bone over the inner condyle, and was followed by a confinement of seven months to the house; the limb continuing in the deformed position already noticed.

The joint was immovable though the patient imagined he was able to produce a slight degree of motion. The condyles of the femur were prominent, and stood in advance of the tuberosity of the tibia with the patella deeply and immovably imbedded between them. An irregular bony projection was observed over the inner condyle where an extensive scar marked the situation of the original wound. Several other scars of openings were visible from which matter had been discharged in the progress of the inflammation consequent on the injury, for instance, one on either side in the ham and three on the anterior and lateral surfaces above the condyles. The tendons in the ham stood out in prominent relief from the limb. The skin and subjacent soft tissues enveloping the joint were supple and healthy. Since his recovery from the effects of the injury, the patient had enjoyed

uninterrupted good health, and had been free from pain or tenderness in the knee; he had been accustomed to walk with one crutch, though sometimes he dispensed with it and stooped to accommodate himself to the shortened condition of his limb. The deformed limb was shorter and in every respect less developed than its fellow.

It was explained to the patient that from the condition of the joint, the limb did not admit of being improved in its position, by any ordinary surgical operation, but that in a few similar cases, an extraordinary operation consisting in removing a wedge-shaped portion of bone from the femur above the condyles had been resorted to with favourable results.

There being some weighty objections to this operation, it was proposed to modify it in its application to his case, and as the joint itself no longer existed in its normal condition, with secreting articular surfaces, it was judged equally safe to perform a similar operation upon the parts pertaining to the joint which, to all appearance, were free from disease.

The advantages contemplated by this modification were that more extensive surfaces of contact for bony union would be obtained, and greater strength of limb secured with less remaining deformity than was practicable in the operation of Dr. J. Rhea Barton, of Philadelphia, already alluded to.

The patient was fully apprised of the serious nature of the proposed operation, and the dangers incident to it.

Being, however, exceedingly desirous of relief from his deformity, he decided after a few days' reflection, to submit to it. It was accordingly performed with the concurrence and aid of the other surgeons of the hospital, the 12th day of October, 1844, as follows:—

Operation.—Preparatory to the operation, the tendons of the biceps, semi-tendinosus, semi-membranosus and gracilis muscles had been divided five days before, in the usual manner, by two subcutaneous incisions, in doing which the peroneal nerve was unintentionally cut across and was followed by numbness and pain extending to the foot; the punctures, however, had healed and no inflammation remained in the ham.

The tourniquet having been applied to the upper part of the thigh, an incision was made from the outer to the inner condyle, across the middle of the patella, and a second incision from the middle of this, perpendicularly downwards to the tuberosity of the tibia. The included angles of integument were dissected down to a finger's breadth below and parallel with the margin of the articular surface of the tibia. The ligamentum patellæ and the fibro-ligamentous tissues on either side were cut through on the same level to the extent of nearly two-thirds of the circumference of the bone. With the amputating saw a section of the tibia was made at three-fourths of an inch below the joint anteriorly and directed with a slight obliquity upwards so as to terminate at the margin of the articular surface posteriorly. Two-thirds of this section was accomplished with the amputating saw. The

second section was then commenced through the upper part of the patella, parallel with the first, and on a plane forming an angle with it, less than a right angle, and continued to about the same extent as in the first section with the same saw. The remainder of the section through the tibia, as well as through the condyles, was completed with a metacarpal saw and chisels. The included wedge-shaped portion of bone being removed, it was found the section had not been carried far enough backwards, the posterior portion of the condyles still remaining consolidated with the tibia.

To include this a new section was undertaken, commencing upon the cut surface of the femur, three-fourths of an inch anterior to the angle at which the sections already made met, and directed backwards and upwards on a plane more oblique in reference to the axis of the femur. This new section being removed, the remaining points of connection were ruptured by cautiously flexing the leg on the thigh, after which the irregular prominences were pared away with the bone forceps. An attempt was now made to extend the leg upon the thigh, when it was found that the bony surfaces could only be brought to within a finger's breadth of each other anteriorly. The soft parts in the ham being rendered tense and opposing great resistance to the extension, the attachments of the ligaments were dissected up posteriorly from the tibia while the leg was held in a state of extreme flexion, and, in addition to this, a further section of five-eighths of an inch thick was removed from the anterior two-thirds of the femur.

The leg could now be extended to the required degree with the bony surfaces in contact at every point, and the soft parts posterior to the joint in such a state of tension as to give steadiness and solidity to the coaptation.

The section of the condyles exceeding that of the tibia in its antero-posterior diameter, caused an overlapping in front of about half an inch. The hemorrhage was very moderate and only two ligatures were required to small branches given off by the popliteal trunk. The soft parts posterior to the joint and separating it from the artery were very little disturbed. The angular flaps of integument being redundant in the new position of the limb, were pared away to the required extent and secured in contact by seven sutures. The limb was then placed on an inclined plane with a slight angle at the knee, and after the patient was removed to his ward, adhesive straps were applied between the sutures and a compress of dry lint laid loosely over the whole.

The operation exclusive of the dressings occupied 40 minutes, and though very painful, was borne with remarkable fortitude.

At evening patient had felt somewhat chilly, and on moving his arms experienced twitchings in his limbs; the knee was becoming painful; pulse scarcely accelerated; a pretty copious oozing of blood from the wound was taking place. Ordered flaxseed poultice and tinct. opii. gutt. xl, pro haustu.

October 13th.—Passed a very comfortable night and slept after midnight; chilliness continues; pulse 112; tongue but little changed; occasional twitchings continue and pain in the joint increases; oozing nearly ceased; scarcely any swelling has taken place; temperature moderately increased.

At 6 P. M.—Febrile reaction was fully established; pulse 120. Twenty-four leeches have been applied around the knee, and are bleeding freely. Ordered tinct. opii. gutt. xl, at bed time, and to be repeated at midnight if necessary.

14th.—Patient more comfortable; passed pretty good night after midnight; pain in the knee very much diminished; twitchings not increased; pulse 108; countenance good; has tenderness and swelling of the lymphatic glands in the groin; ordered cold water dressing.

At 6 P. M.—Pain in the knee had again increased; pulse 120, with pain in the head and back; bowels confined; ordered 6 leeches to the groin and 18 to the knee around the condyles. R.—Ant. tart. gr. j; infus. sennæ comp. ʒvij. Dose ʒj every two hours.

15th.—Disturbed night; pain in the bowels and back; knee much easier; twitchings abated; tenderness in the groin diminished; pulse 108; tongue coated with yellowish fur in middle; knee moderately swollen without redness; only one evacuation from bowels; ordered laxative enema.

At 6 P. M.—Complained of bowels and back; pulse 108. Ordered enema of starch with tinct. opii ʒj.

16th.—Passed a good night. Bowels easy; pulse 100; changed adhesive straps and found wound looking well without any appearance of erysipelas; suppuration commencing; at evening pain in abdomen increased. No pain in the knee; pulse 98. R.—Starch enema, with tinct. opii ʒi. Poultice to abdomen.

17th.—Quite free from pain; pulse 96; suppuration increasing; apply poultice to knee.

18th.—A disturbed night from griping pains in the bowels and twitchings of the limb; pain of limb referred to knee and instep; pulse 92; swelling and redness of knee moderate.

20th.—Progress favourable; pulse 92; allowed more nourishing diet; oysters, &c.; removed the last sutures.

23d.—General condition continues favourable; twitchings of the muscles are the greatest source of suffering; they are not confined to the limb, but extend to other parts of the body; two or three times they have attacked the bowels with great violence. Some displacement has been the consequence, so that the anterior edges of the condyles of the femur are about an inch in advance of the tibia; pulse 88; appetite good; tongue clean; bowels confined; suppuration moderate and healthy; edges of wound cicatrizing except at the angles of the wound over the condyles. Take sol. sulph. morph. gutt. xv; aquæ menth. pip. ʒss at bed time, and repeat, if necessary, ol. ricini ʒi.

Nov. 1st.—Progress for the most part favourable; at times, pain in the knee is very severe; twitchings continue, but in a less degree; position of limb improved; less riding of the excised ends of the bones past each other; discharge from outer angle of wound copious.

Dec. 9th.—Wound has been healed for more than a week; pain and twitchings after diminishing gradually, have now entirely ceased. Union is taking place between the bones; a slight degree of motion only is perceptible; patient's general health, after suffering considerably from protracted pain, privation of rest, &c., has been steadily improving for some time past; pulse 90; tongue clean; appetite good; bowels regular; rests well at night with only an occasional anodyne. For the relief of the twitchings from which patient suffered so much, anodynes were the most effectual remedies. Solution of sulph. morphium was given in 15 drop doses, twice repeated at bed time, besides which he took a mixture containing $7\frac{1}{2}$ drops at a dose, at discretion, when his sufferings rendered it necessary. The limb throughout the treatment was supported on a double inclined plane, with lateral splints and pads above and below the knee.

Patient left his bed the first week in January, with the limb supported in the apparatus that is used for forcible extension of the knee joint. At this time a slight degree of motion in the direction of flexion and extension was still perceptible, but none in a lateral direction. He was soon able to support himself on crutches and placed his foot on the floor, and, after a while, left off the apparatus and only applied a bandage. As the patient's general health improved he acquired strength in his limb, so that for two or three weeks preceding his discharge, he walked about the hospital grounds with the aid of a cane only. The difference in the length of the two limbs was compensated for by a stirrup-shaped frame secured to the sole of his boot by means of an iron plate. The bony union at the knee had become firm without any perceptible motion, and the cicatrix of the skin as well as the subjacent tissues was supple and movable. The only uneasiness felt from exercising was referred to the calf of the leg and instep. The difference in the length of the limbs was about 5 inches, at the heel of which not more than one-half could be ascribed to the operation; the remainder depending on defective growth in the limb subsequent to the inflammation of the joint.

On the 22d of April last, patient took his discharge, to return home to Canada near Niagara Falls, well pleased with the improved condition of his limb.

Three days before leaving the hospital he walked a distance of two miles with the aid of a cane only, and without pain or unusual fatigue. The accompanying drawings taken from plaster models, show the condition of the limb before the operation, (*see fig. 1.*) and at the time the patient left hospital, (*see fig. 2.*) The full length view (*fig. 3.*), is from a Daguerreo-

Fig. 1.

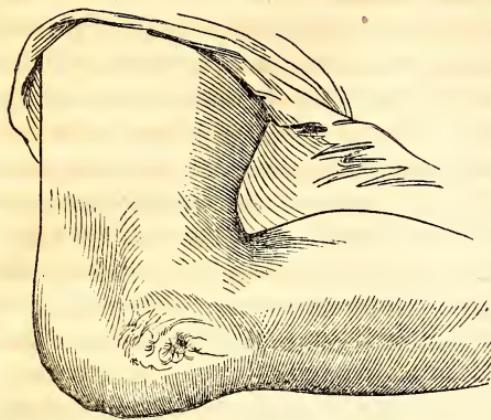


Fig. 2.

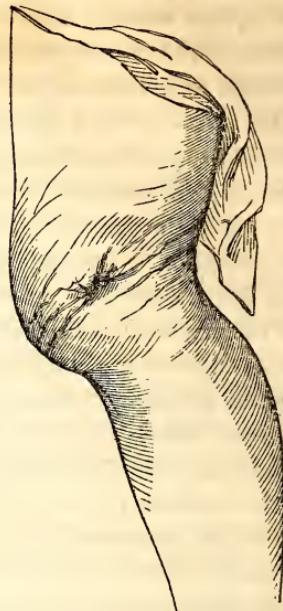


Fig. 3.*



type taken three days before his discharge. The models have been deposited in the Museum of the University of Pennsylvania, as well as the pathological museum of the New York Hospital.

Description of the excised bones.—The inferior two-thirds of the patella had been removed by an oblique cut from above downwards and from before backwards, and was found consolidated with the outer condyle by bony growth without any trace of the line of junction. It was adherent to the inner condyle by condensed cellular tissue. Both condyles were buried into and consolidated with the articular surface of the tibia.

The cut surface of the condyles, for the most part, presented a compact eburnated texture with only slight remains of cellular tissue interspersed. The space between the patella and tibia and behind the ligamentum patellæ was filled with condensed adipose and fibrous tissue.

* [In the Daguerreotype from which this wood-cut was engraved, the figure was reversed, which was not observed by the Editor until the engraving was finished.—ED.]

No vestiges remained of cartilage or synovial membrane.

The cut surface of the tibia presented its normal cellular texture, except a single large cell capable of holding a filbert near the outer edge of the bone and having for its upper wall the thin compact shell of the articular surface. The section of the patella was also of normal cellular texture, with a similar large cell of three-eighths by three-fourths of an inch in extent. A third and much larger cell capable of containing a hickory nut, occupied the inner condyle near its articular surface. These cells were lined with a thin reddish membrane and contained an oily and fatty matter of reddish colour. Another incomplete cell was also found in the outer condyle, intersected with septa, subdividing it into smaller compartments lined and filled like the rest; none of these cells perforated the outer shell of bone, though at some points they approached very near it.

Subsequent, long-continued maceration separated the several parts from each other.

Remarks.—Though this operation was severe and protracted, the subsequent inflammation and suppuration were by no means excessive, and were confined to the parts immediately involved without spreading to a distance. Primary union of the edges of the wound took place to as great an extent as was desirable; openings remaining over the condyles at the extremities and in the middle of the transverse incision for the discharge of matter. At one time a small opening formed posteriorly in the ham, and after discharging a few days, closed spontaneously; with this exception, there was no burrowing of matter between the muscles, and at no time did the discharge exceed two ounces in 24 hours.

It had been my aim in the operation to disturb as little as possible the soft parts beyond the limits of the joint, especially those posterior to it, so as not to establish any direct communication between the wound and the loose intermuscular cellular tissue by which inflammation is so readily propagated. The long continuance of the pain in the knee and the twitchings, notwithstanding the generally favourable aspect of the parts themselves, were the principal cause of solicitude in this case.

Though the patient's condition at no time could be viewed as critical, yet his protracted sufferings, mitigated only without being controlled by anodynes, necessarily kept alive apprehensions as to the ultimate result. It may be reasonably questioned whether these painful symptoms were necessarily chargeable upon this operation or were not rather to be attributed to certain peculiarities in this case that might be avoided in another. For instance, the division of the peroneal nerve in the section of the tendons and the subsequent stretching of its recent cicatrix, together with the general state of tension of all the tissues in the ham produced by the altered position of the limb. This is more probable, from the fact that the patient complained of pain along the course of the peroneal nerve, and of twitchings of the posterior muscles of the limbs as more severe than elsewhere. In

concluding this report it is due to Drs. Cook and Jones, the resident surgeons who successively had charge of this patient, to express my indebtedness for their efficient co-operation in the treatment of his case, the favourable result of which, is in no small degree to be attributed to their untiring patience and devotedness.

NEW YORK, May 31st, 1845.

ART. II.—*Observations on Molluscum, with a case.* By J. H. WORTHINGTON, M. D., Resident Physician to Friends' Asylum.

AMONG the diseases which occur but rarely and offer few opportunities for observation, is one to which Bateman first drew attention in his work on diseases of the skin, under the name of molluscum. It is characterized, says he, by the appearance of numerous tubercles of slow growth and little sensibility, and of various sizes, from that of a vetch to that of a pigeon's egg. They contain an atheromatous matter and are of various forms, some being sessile, globular or flattish, and some attached by a neck, and pendulous. The growth of these tumours is apparently unconnected with any constitutional disorder. They show no tendency to inflammation or ulceration, but continue through life having apparently no natural termination.

He speaks of the disease as occurring under two distinct forms, the principal distinguishing features of which are, that one is never contagious, while the other seems to possess the property of communicating itself in this way. In the first, the tumours do not discharge matter, in the second, a milky fluid may be pressed out which is considered to be the medium of contagion. As an instance of the contagious form, he reports the case of a young woman whose face and neck were thickly studded with round prominent tubercles of various sizes, from that of a large pin's head to that of a small bean, which were hard, smooth and shining on their surface, with a slight degree of transparency, and nearly of the colour of the skin. The tubercles were all sessile upon a contracted base without any peduncle. From the larger ones a small quantity of a milk-like fluid issued on pressure from a minute aperture, such as might be made with a needle's point, and which only became visible on the exit of the fluid. The progress of their growth was very slow, for the first tubercle had appeared on the chin a twelvemonth ago, and only a few of them had attained a large size. She ascribed the origin of the disease to contact with the face of a child whom she nursed, on which a large tubercle of the same sort existed, and on a subsequent visit she stated that two other children of the same family were disfigured by similar tubercles; and besides that, the parents

believed that the first child had received the eruption from a servant on whose face it was observed.*

Of the first variety, (*M. non contagiosum*), cases are recorded by Caze-
nave, Schedel, Biett, and Gibert. The appearance of the tumours in this
form is very accurately given by Bateman in his description of the disease
referred to above. They appear to be formed by an alteration of the seba-
ceous follicles, accompanied by a retention and accumulation of their natu-
ral secretion, which becomes altered in its nature, the orifice of the follicle
being closed.

Whatever may be the arrangement of structure which constitutes these
tumours in the origin of the disease, in their last stage they do not appear
to differ in their anatomical characters from the encysted tumours known
under the names of Meliceris, Steatoma and Atheroma. Dr. W. L. Atlee, in
an interesting case published in this Journal (April, 1844), in which he had
an opportunity of opening the tumours on the dead body, states, that they
consisted of an elastic or homogeneous, semi-solid, gelatiniform substance,
not liable to disintegration on pressure, and of a yellowish-white colour;
and Dr. Gross, under the head of diseases of the sebaceous follicles, gives
an account of a man 40 years of age, who had several hundred of these
tumours on the head and trunk. They commenced when the patient was
quite young, soon after bathing in cold water, and had never caused him
the slightest pain. They were of the meliceric kind, and the largest were
of the size of a hen's egg, the surface of many being uneven and hard,
and then encrusted with a hard sebaceous matter of a dark colour.†

Drs. Henderson and Paterson have described cases of the second variety
(*M. contagiosum*), in the Edinburgh Medical and Surgical Journal, (vol. lvi,
1841, p. 213,) and Wilson, in his excellent treatise on diseases of the skin,
mentions several, though he denies the possibility of their communication
by contact.

In this form the tumours are produced by a retention of the sebaceous
matter of the follicles and their consequent distension. In some cases the
secretion remains fluid, in others it becomes concrete. The orifice of the
follicle is permeable, and the contained fluid may be pressed out, or when
the contents are solid they may be removed through the aperture if open,
as it sometimes is, by a pointed instrument. They attain the size of a
currant, which they also resemble in form, and when left to themselves,
terminate by becoming inflamed at the summit; the gland and its contents
being then discharged entire, or the whole tumour may slough in conse-
quence of the inflammation. (Wilson, p. 285.)

Almost all of the cases of this form of the disease that are recorded,
have occurred under circumstances which favour the idea of contagion,

* Practical Synopsis of Cutaneous Diseases, vol. 2, p. 271 and 2.

† Pathological Anatomy, vol. i, 374.

but there are doubts upon this point which can only be settled by future observation.

Tumours of a different character have no doubt been referred to the molluscum of Bateman, but the term ought to be restricted in its application to such as consist of an alteration of the follicles. The case from which he took his description of the disease is evidently of this nature.

The subject of it was a man 50 years of age, on whom the tumours had existed from birth.* "On the summit of some of the largest excrescences small apertures are conspicuous, from which may be pressed out oblong black bodies, (commonly called *comedones*,) each of which is terminated by a whitish tendon prolongation."

The following case is an example of the first variety, and together with those recorded by Atlee and Gross, will go to prove the existence of a form of molluscum different from that described by Henderson, Paterson and Wilson. The difference in the form and size of the tumours, in the state of the follicular orifice, in the term of existence in the two cases, and the tendency to inflammation in one, and the absence of such a tendency in the other, would seem sufficiently striking to establish their separate identity.

CASE.—E. N., female, aged 25, was received into this institution on the 28th Feb., 1845, having been affected from childhood with mental imbecility. Her face, neck, body, extremities, palms of the hands, and soles of the feet are thickly studded with minute tumours of various sizes and different forms. The smallest are the size of a pin's head, others are as large as a split pea. They are soft and elastic to the touch, and are covered with cuticle, which generally does not differ from that of the intermediate spaces, which is natural in its appearance. The greater number of these little tumours are flattish, rising but little above the surrounding surface, others are prominent and approach more nearly the globular form. One on the palm of the hand and another on the sole of the foot are more developed, equaling a filbert in size and differing from the ordinary form of the smaller ones, in being nearly globular instead of flattish, and having a contracted base. These are soft and seem to contain a pulpy or semi-fluid matter. The tumours are not attended with pain or other disagreeable sensation; they are perfectly indolent in their character, no sign of inflammation being observed in them. The skin over a few of the smaller ones is slightly discoloured and livid, owing to a defect in the capillary circulation.

They exist in the greatest numbers on the neck and shoulders, where they are so numerous that the point of the finger cannot be placed upon the surface without coming in contact with them. They are fewer on the

* *Historia Pathologica singularis cutis turpitudinis*, J. C. Rinhardi, viri 50 annorum. C. F. Ludwig, Lipsiæ, 1739. Cited by Wilson, Pract. and Theoret. Treatise on Diseases of the Skin, p. 287.

hands and arms, and fewer still on the face, where they are quite small and soft, and appear more prominent to the sight than to the touch.

Although they have existed from an early period of the patient's life, they seem to have undergone little or no alteration. They have no tendency to suppurate or ulcerate. The large one on the hand was scratched with a rough piece of iron previously to her admission, so as to cause some inflammation on its surface, which subsided without having produced any prominent change in its appearance.

On the left cheek towards the angle of the mouth there is a large flattish swelling, soft and elastic to the touch, differing from the others in not being confined to the skin, but implicating the whole substance of the cheek; this, she says, sometimes becomes sore and discharges matter.

The general health of the patient is somewhat disordered. Her pulse ranges from 90 to 100 beats in a minute. The tongue is red, papilla over its whole surface, much elevated, and her abdomen is tympanitic. Sometimes she complains of headache, costiveness, loss of appetite, and is unwilling to leave her bed for two or three days at a time.

This patient remained in the institution two months and was put upon the use of Donovan's solution, gradually increased to 30 drops three times a-day, during which her general health improved and her skin assumed a more healthy colour than it was at first, but no perceptible diminution in the size of the tumours could be observed.

ART. III.—*Report of three cases of Puerperal Peritonitis, which occurred in the wards of the Pennsylvania Hospital.* By F. W. SARGENT, M. D.

THE following cases of puerperal peritonitis occurred in the lying-in wards of the Pennsylvania Hospital, in the spring of 1845, during the service of Dr. Hodge, while the writer was resident physician of the hospital. The patients were attended by Dr. Hodge and Dr. Meigs. It will be seen that the most vigorous antiphlogistic treatment was pursued and failed of success.

Besides these three patients, there were five others in the wards; three of them in daily expectation of their confinement, and the remaining two already delivered. Of the latter, one was confined three days before the first case of sickness occurred; and the other, about an hour before the delivery of Sarah Ewing—the second case. Neither of these last two had any unpleasant symptoms. As a precaution, the three women who were yet to be confined were advised to leave the hospital, which they did.*

* It will not be considered as out of place to mention here, that several years ago, while there were a number of cases of puerperal peritonitis in the wards of the hos-

CASE I.—Margaret M'Bride, a robust, healthy Irishwoman, aged 28; has been living out at service during the whole of her pregnancy, and relinquished her work yesterday morning to come to the hospital, the pains of labour having commenced. Her health during pregnancy has been very good; her bowels usually costive, particularly so during the last two weeks. The labour occupied about 24 hours, the delay being occasioned by a want of proportion between the diameter of the inferior strait and the head of the child. The child was delivered by the forceps at 2 o'clock, P. M., March 3d, 1845. In the morning, $\frac{3}{4}$ pint of blood were taken from the arm. Immediately after delivery, she was directed to take $\frac{3}{4}$ jij of the solution of morphia with some camphor water, soon after which she fell asleep. In the evening her respiration was slightly hurried, and the pulse a little fuller than natural; rested well during the night.

March 4th, 8 o'clock, A. M.—Respiration less frequent than in the evening previous; pulse 88; not so full as it was last night, but the character of the breathing and of the circulation was not entirely satisfactory. Slight headache; tongue slightly coated; skin rather sallow. She was ordered grs. v calomel, to be followed in the course of a few hours by an enema of warm water with soap. 8 o'clock, P. M.—The injection had produced several evacuations from the bowels. Abdomen soft; very little distension; fundus of the uterus quite sensitive to pressure; a deep inspiration gives rise to a feeling of uneasiness and soreness at the lower part of the abdomen, and occasionally, pain is experienced in the same region, independent of pressure, of a gripping character. Respiration frequent and sighing; pulse 130, soft and not particularly full; skin hot and dry; some headache in the frontal region; tongue moist, scarcely at all furred; some thirst; countenance good; no depression of mind. The lochial discharge abundant; mammæ becoming fuller. Bled $\frac{3}{4}$ pint by the direction of Dr. Hodge, when she became sick and faint. R.—Calomel., pulv. Doveri, $\frac{1}{2}$ dr. M. ft. pulv. in ch. No. viii, div., of which she takes one every hour. A hot fomentation was applied over the abdomen, and barley water allowed as a drink. 12 o'clock.—Pulse 115; skin moist and less hot; no headache; less thirst. The blood drawn in the evening was a little cupped.

5th. 8 o'clock, A. M.—Pulse 130; skin hot and dry; 40 inspirations per minute, hurried and sometimes sighing. Expression of face anxious, with depression of spirits; thirst very annoying; scarce any headache; eructation of gas from stomach from time to time; abdomen soft; very little distension; not at all tender excepting in the uterine tumour; the latter has risen to the level of the umbilicus, is movable and soft, excepting dur-

pital, a cow belonging to the institution was delivered, on the same lot of ground as the lying-in wards, but separated from the latter by a narrow intervening space. A few days after parturition, the animal became sick and died. A post-mortem examination was made, and evidences of recent and most extensive acute peritonitis were disclosed.

ing a contraction, to which it is occasionally subjected, when it becomes hard and smaller; direct pressure upon it, or a prolonged inspiratory effort and coughing are painful. Urine voided freely and without pain. The patient vomited two or three times during the night, without, however, throwing up the medicine. VS. ad $\frac{3}{x}$, when prostration was induced as before. R.—Calomel., p. jalap., $\frac{aa}{a}$ grs. x. M. ft. pulv. Two hours after the bleeding, the skin was found more moist and of a pleasanter temperature, and the pain and tenderness in the uterine tumour were lessened. The blood was cupped—the clot firm. The effervescent mixture was directed to be given every hour. At noon, an injection of soap and water was administered, and after this had operated freely an anodyne enema, containing sixty drops of laudanum, was given.

6 o'clock, P. M.—Skin moist and warm; pulse still above 120, of sufficient volume; respiration less frequent and more quiet; 24 inspirations per minute; entire absence of pain and tenderness of abdomen; mammae rather more full; lochia abundant; thirst less annoying; enjoyed nearly two hours sleep, during the afternoon; pleasanter expression of face; complexion less pale and sallow. In the course of the night, a tablespoonful of oil was given her, with the view of relieving the distension of the abdomen which had increased a little. Several dark-coloured, offensive, thin passages followed, after which an anodyne enema was given.

6th. 8 o'clock, A. M.—Expresses herself as feeling somewhat better; no headache; but little thirst; flatulence diminished; no abdominal pain; very slight tenderness in the region of the left ovary; pulse 124; skin scarcely moist, of a somewhat elevated temperature; respiration quite easy; expression of face encouraging; state of lochial discharge and of mammae as last night. R.—Calomel., p. ipecac., $\frac{aa}{a}$ gr. one-half. M. ft. pil. To be given every hour alternately with effervescent draught. The mammae were covered with soap plaster. Poultice continued.

7th. 8 o'clock, A. M.—Symptoms continued through yesterday pretty much as in the morning; anodyne enemata were administered from time to time to check a disposition to purging; during the afternoon appeared to be tolerably comfortable. Symptoms this morning as follows:—Pulse 100; skin soft and moist; respiration quite tranquil; no headache; tongue moist, slightly coated; mammae not filling; lochia diminishing a little in quantity; abdomen soft, and free from tenderness; not much distension; bowels loose, so as to render the cretaceous julep advisable. The symptoms continued as above until early in the afternoon, when the pulse became accelerated, and the abdominal uneasiness increased. 6 o'clock, P. M.—Pulse 120, soft, volume as in morning; respiration a little more frequent and uneasy; tongue moist, covered with a thin whitish fur; gums slightly swollen; abdomen more distended than in the morning, and more tender, and at times, pain is experienced without any external cause. Urine passed freely and without pain; mammae neither more nor less full than

in the morning ; a little yellowish-white, oily liquid can be expressed from them ; more anxiety of mind. R.—Calomel., gr. ss, p. opii., gr. j. M. ft. pil. q. h. s., instead of the former prescription. Frictions with camphorated mercurial ointment over the abdomen. Chalk mixt. withdrawn. 11 o'clock, P. M.—Pulse 108 ; (98 during sleep, a few minutes before the visit;) abdominal pain less acute ; considerable tenderness about the left ovary ; bowels more disturbed ; abdomen soft, but tympanitic. The uterus high up in the cavity of the belly, its fundus being within two fingers' breadth of the umbilicus ; turning from side to side causes pain ; motion of the limbs not complained of ; one evacuation from the bowels since last visit. Urine voided very sparingly ; about $\frac{1}{2}$ x was drawn from the bladder by the catheter. Lochial discharge ceased ; mammae as before ; mind less depressed than at the last visit. The amount of opium diminished one-half ; $\frac{1}{2}$ ij of blood to be taken by leeches from each groin. Soft poultice ordered to the external genitals, which are tumid, red, and sore. Broad, elastic flannel band drawn with some tightness around the belly.

8th. 8 o'clock, A. M.—During the night she slept very well ; one small discharge from the bowels ; the abdominal pain entirely relieved by the leeches ; about midnight, as the pulse became more feeble, she was ordered arrowroot made with milk ; her diet, heretofore, having been of the strictest kind. This morning, pulse 112 ; skin not hot ; countenance more lively ; spirits more buoyant ; respiration still frequent and sighing ; no pain in abdomen, tenderness felt on firm pressure ; abdomen more distended. Calomel and opium withdrawn. Enema of soap water. R.—Potass. bicarb. gr. v ; g. opii gtt. x ; aquæ menth. $\frac{1}{2}$ ss. M., q. h. sumend. The injection operated twice, without, however, procuring the subsidence of the abdominal distension ; in the middle of the day, an eruption of the hives appeared all over the surface ; a blister was kept applied for six hours to the mammae. Corn meal gruel was substituted for the arrowroot, in the hope that it might relieve the distension of the belly. 6 P. M.—Pulse 140, very feeble ; respiration more sighing ; skin warm, occasionally bedewed with a clammy moisture ; countenance pretty good ; lips of good colour ; mind not more depressed ; frequent eructations of gas with acidity of stomach after taking the gruel. Tongue dryish and white in centre, moist and of good colour around the margin ; abdomen tense and very much swollen ; not painful, nor tender ; urine removed by catheter ; bowels not disturbed since noon. Chicken water substituted for the gruel. Wine whey. A stomach tube was inserted its entire length into the bowels, by which large quantities of gas escaped, producing much relief ; the tube was allowed to remain in the rectum. R.—Quiniæ sulph., p. rhei, $\frac{1}{2}$ gr. ij every half hour. 10 P. M.—Abdominal distension as great as before ; very little tenderness ; diaphragmatic pain ; bowels not moved. R.—Ol. ricini $\frac{1}{2}$ ss., ol. terebinth gtt. xxx. M. Suspend other medicines. Hot water on abdomen instead of the flannel band. Chicken water and brandy punch.

9th. 8 A. M.—The bowels were moved once with the discharge of much gas; sinking rapidly. Quinine resumed. At noon grs. v carb. ammonia substituted for the quinine. 10 P. M.—No improvement; mind clear; less distension of belly; restless; no vomiting nor hiccup. Died early in the morning of the 10th.

CASE II.—Sarah Ewing, æt. 19, of a delicate make and fair complexion; has one child living, and has had more than one abortion. During her pregnancy her health has been very good.

Delivered early in the morning of March 5th, after a short and easy labour; child of fair size and apparently healthy. After-pains of considerable severity followed delivery; they were in some degree relieved by anodynes, but were experienced more or less during the whole day.

6th.—Experiences no unpleasant symptom, excepting an occasional pain in the uterus of no considerable severity; slight tenderness on pressing the womb, the fundus of which is four fingers' breadth above the pubis; pulse 75; skin cool and moist. In the evening, pulse 80; skin warmer than in the morning; no headache; no increase of uterine tenderness, nor abdominal fullness; urine passed without difficulty; mammae filling; lochial discharge as it should be.

7th.—Reported to have slept apparently well until about 4 o'clock this morning, when she was aroused from an unpleasant dream by severe pain in the abdomen; her feet and legs became cold also, and she felt chilly for a short time; fever soon followed with thirst, headache, increased pain in the belly, &c. 5 o'clock, A. M.—Countenance expressive of pain; features pinched; face pale; pulse 120; soft, not large; skin hot and dry; very little headache; thirst urgent; respiration easy enough excepting during the presence of pain, when the uterus, from being soft, extending nearly to the umbilicus, becomes exceedingly hard and somewhat contracted in size; no tenderness on pressure excepting near the pubis; motion of the body or of the thighs, coughing, or a deep inspiratory effort is painful; bowels have not been moved since her delivery; tongue dryish in the centre; edges covered with a milk-like coating; mammae a little more rounded and full than last night; lochial discharge of proper character and quantity. $\frac{3}{4}$ x of blood were taken from the arm, when the patient became exceedingly faint and sick; this did not appear to be the result of any mental emotion, but there seemed to be but feeble action in the heart; the veins were very small. She was bled, too, in a recumbent posture, the head and shoulders being but little elevated. Hot anodyne fomentations were applied to the abdomen and directed to be renewed every two hours, and she was ordered the following:—R.—Calomel., pulv. jalapæ, $\frac{1}{2}$ grs. x. M. ft. pulv. An anodyne enema of 40 drops of laudanum was also administered. 8 o'clock, A. M.—Pain much relieved; motion of the limbs and body less painful; diminished tenderness; tongue moist, its whole surface covered with a

thin white fur ; slimy taste in mouth ; skin moist and warm ; no headache, nor nausea ; pulse 112, soft and rather larger than before she was bled. About the middle of the afternoon the pulse became rather more frequent, the skin more hot and the abdominal pain returned. Anodyne liniment over abdomen in addition to the poultice. $\frac{3}{4}$ ss oil with 20 drops laudanum. 6 o'clock, P. M.—Pulse 120 ; soft and regular ; respiration quickened ; but not laboured nor sighing ; moderate heat of skin ; rather more colour in face ; no headache, but a sense of weight and fullness above the eyes ; tongue covered with an uniform, thin, white fur ; no nausea ; abdomen full and moderately resonant ; uterus about half way between the umbilicus and pubis quite tender, particularly about the right broad ligament. Breasts fuller ; lochia sufficiently abundant ; bowels not moved. VS. ad $\frac{3}{4}$ x, in an almost recumbent position ; the bleeding was arrested only when faintness was induced. Enema of soap and water with $\frac{3}{4}$ j oil. External applications as before. 11 o'clock, P. M.—Pulse 130, very soft ; skin more hot than at the last visit ; face pale and expressive of suffering ; respiration frequent and sighing ; abdomen more distended with gas, and more painful, so that any motion of the body and sometimes the weight of the bed-clothes cause suffering ; uterus soft and tender upon pressure, particularly on the right side ; urine voided freely. The bowels were slightly moved. A third bleeding was advised, but though the orifice made a few hours before was freely open, the blood only escaped drop by drop, nor could a vein be found in either arm of sufficient size to warrant the hope of success. R.—Calomel grs. v., q. h. s. R.—Empl. vesic. $3 \times 4\frac{1}{2}$, to be placed on the inner and upper part of each thigh. Forty-five drops of laudanum by enema every two hours.

8th.—An anodyne enema was administered at 11 o'clock, and also at 12 o'clock last night, when she fell asleep and slept soundly until half past four o'clock this morning. 8 o'clock, A. M.—Pulse 120 ; soft, of more volume than last night ; skin more pleasant as regards temperature and moisture ; respiration 32, occasionally sighing. Face more animated ; pain not experienced excepting from direct pressure on the uterus, or from turning in bed : belly much distended ; subsultus tendinum observed at the wrists. Since 11 o'clock last night 180 drops of laudanum have been administered by enema. R.—Potash mixt., every two hours alternately with calomel as above. Soap water enema. Corn-meal gruel with salt, as diet. The injection operated well, releasing large quantities of gas from the bowels, and affording considerable relief. During the day she suffered little or no pain, and enjoyed some sleep. 6 P. M.—Pulse 116, of sufficient volume ; skin pleasant ; no pain in abdomen, and but very little tenderness on pressure. Uterus rising a little above the pubis ; lochial discharge pretty abundant ; no increase in the secretion of the mammae ; urine passed freely and with ease ; occasional eructation of gas with a sour fluid. Countenance pretty easy and pleasant ; some buoyancy of mind ; complexion rather brighter ; manner calm

and quiet ; some appetite ; tongue not entirely moist ; gums very slightly affected. Suspend the calomel. Continue potash. Substitute chicken water seasoned with cayenne, for the gruel. 10 P. M.—Pulse 120 ; slight increase of tenderness of abdomen ; mind slightly depressed from last visit. Resume the calomel. Frictions with turpentine and sweet oil, and hot fomentations to abdomen. Enema of soap water.

9th.—The bowels were moved two or three times during the night, and much gas was discharged at each operation. Slept but little, though a full anodyne enema was given after the bowels had ceased being disturbed. 8 o'clock, A. M.—Pulse above 120, very soft and feeble ; manner hurried and restless ; respiration accelerated ; countenance expressive of anxiety and alarm ; lips of good colour ; very little distension of abdomen, so little that the lower edge of the false ribs is protuberant. Considerable tenderness over the whole uterine tumour, which extends about half way between the pubis and the umbilicus ; tongue less moist ; breasts rather diminished in volume ; lochia continue pretty much as yesterday ; occasional hiccup. A large blister applied over the abdomen. At her request, porter sangaree with ice. Anodyne enemata, p. r. n. She became more and more feeble during the day ; much restlessness and jactitation ; no delirium. In the evening, R.—Ammoniaæ carb., grs. x, q. h. secondâ.—Continue anodyne.

10th.—More prostration ; and the sinking continued increasing until evening, when she died, at 5 o'clock. The abdominal distension had entirely disappeared, nor could fluctuation be detected. No vomiting ; no milk in breasts ; the lochial discharge continued until about noon.

CASE III.—Marguerite Rocher, æt. 40. The patient was a woman of rather large frame, of pretty good constitution, inured to fatigue. Health generally good, excepting that during the two months preceding her confinement, she had suffered more or less from dysentery and subacute rheumatism.

She was delivered on the 8th March, 1845, at 5 o'clock, A. M., after a very easy and short labour. The placenta was extended spontaneously from the uterus. Not more blood was lost than usual. From the time of her delivery until about the middle of the afternoon she suffered considerably from after-pains ; they were then entirely relieved by an anodyne enema, containing 45 drops of laudanum, after which she fell asleep, and remained in that state several hours. Her pulse all day was slow and soft ; skin cool and moist ; no headache ; urine passed spontaneously and without pain.

Early in the morning of the ninth she left her bed and walked a few steps to a close stool to make water, unknown to any one and contrary to express directions and advice. After returning to bed she felt feverish and uncomfortable, without experiencing a chill.

9th. 8 A. M.—Complains chiefly of thirst and headache, and of occasional severe pain in the abdomen, in the hypogastric region. Uterine tumour hard and tender upon pressure, extending about three inches above the arch of the pubis; abdomen moderately full, but soft and not tender excepting as above mentioned. Neither moving the limbs or body, nor coughing gives rise to pain; decubitus either on the sides or back at pleasure. Pulse 100, full and soft, easily compressed; respiration somewhat accelerated; expiration noisy; skin hot and dry; some pain in deglutition, with stiff neck. She was ordered to be bled until a disposition to syncope was produced; $\frac{3}{4}$ xxx were taken, the blood flowing rapidly in a large stream. A powder was also administered, consisting of calomel $\frac{3}{4}$ j, opium gr. j. Hot fomentations were applied to the abdomen, and the neck was bathed with the volatile liniment. The skin became very much relaxed and moist after the bleeding, and continued so nearly all day; the tenderness of the uterus and the headache were also entirely overcome. The blood drawn was neither cupped nor buffy, the coagulum large and soft. A stomach tube was introduced through the os uteri, and the cavity of the womb and the vagina were washed by syringing with tepid and thin flaxseed mucilage. The cervix uteri was not particularly sensitive nor hot; moving the womb upon the finger was productive of pain. 6 P. M.—Bowels not moved; urine removed by catheter; six oz. had collected in the bladder since noon; it was of a bright colour; skin warm, less moist than at mid-day; slight return of tenderness of uterus, particularly in the right flank; limbs moved freely without giving pain; abdomen soft; pulse 106; respiration still accelerated; face has a doughy appearance, with very little colour; lips and tongue pale. Castor oil $\frac{3}{4}$ j; 40 leeches over the right broad ligament. The oil operated freely and repeatedly, producing dark-brown, thin evacuations, containing numerous small masses of faecal matter; considerable relief followed the operation of the oil. 10 P. M.—Pulse 112, full and apparently stronger than in the morning before the bleeding; skin very moist and warm; tongue and lips pale as before; countenance calm excepting during the contractions of the uterus, which occur at irregular intervals and produce considerable pain, with increased tenderness of the organ; during the absence of uterine contraction, the organ is still sensitive on pressure, but to a less degree than before the leeching; belly not distended; no pain on motion of the body or limbs; Vs. ad $\frac{3}{4}$ xij. R.—Calomel gr. v every three hours, and with a view of calming the contractions of the uterus, &c., the following was ordered: R.—Pulv. camphoræ $\frac{3}{4}$ j; calcis. carbonat. $\frac{3}{4}$ ij; aquæ $\frac{3}{4}$ vj; acaciæ gum q. s. M. ft. mist., a tablespoonful every hour. The patient slept quite soundly during the larger part of the night, during which an anodyne enema was administered and repeated a second time, in order to keep the bowels at rest. But little pain was experienced.

10th. 8 A. M.—Pulse 120, soft; skin warm and dry; respiration frequent and sighing; abdomen not distended; uterus at the level of the um-

bilicus, tender all over its surface, particularly about the right ovary; no pain on moving the limbs; no secretion of milk; lochia diminished since evening; urine not voided since last note; $\frac{3}{2}$ x withdrawn by catheter. Vs. $\frac{3}{2}$ xxiv. The blood flowed freely and rapidly and became slightly cupped and sizy. Blister extending from umbilicus to pubis; omit camphor mixt. An hour after the bleeding, the respiration was more full and less frequent; tenderness of uterus somewhat diminished; pulse 140. 5 P. M.—Has had a tolerably comfortable day, having been comparatively free from pain. Pulse this evening, 144; skin warm; complains of great weakness, and looks languid and prostrate. No secretion of milk; lochia scanty; urine withdrawn by catheter; bowels not moved; very little abdominal distension; no increase of tenderness; gums not touched; no other evidence of mercurial impression; grs. xxx of calomel have been taken; blister drew very well; $\frac{3}{2}$ iij of blood were taken from the arm; the calomel was suspended; rennet whey ordered as a drink. 10 P. M.—Some acidity of stomach, and vomiting of a greenish, granular fluid; pulse 160, very soft; skin wet, but warm; tongue dry; respiration frequent and suspitious; at times gasping; abdomen full and soft; ordered lime water as an antacid. During the night she vomited several times, and her general condition wavered frequently. Bowels moved once, urinated twice.

11th. 8 A. M.—Pulse very feeble and as frequent as before; skin warm and moist; tongue dry; some increase of abdominal tenderness, extending above the umbilicus and towards the right hypochondrium; vomiting recurs occasionally; lips of a vermillion hue; eyes sunken, but not dull; urine scanty in quantity, but passed voluntarily. To quiet the stomach, gtt. viij black drop were given every hour with mint water and lime water; two doses were taken. R.—Quiniæ sulph. gr. j; pulv. capsici grs. ij. M. ft. pil., q. h. sumend. Chicken water and wine whey. At noon, the pulse was fuller and stronger than in the morning; vomited only once, and that soon after the last note. Essence of beef was substituted for the chicken water, and to remove, if possible, the irritating secretions from the stomach, an infusion of rhubarb with comp. tinct. cardamom. was directed. In the evening, she was much more feeble, and the sinking continued until about 3 o'clock A. M. of the 12th, when she expired.

At the autopsy made 12 hours after death, the exterior presented nothing remarkable. The uterus extended a little above the umbilicus. The cavity of the peritoneum contained about 6 or 8 oz. of a greenish-yellow, turbid serum, in which were smaller masses of concrete pus of a yellowish colour, soft and breaking under slight pressure; the fluid lay along the fossæ by the side of the spinal column and in the pelvis; the convolutions of the intestines were covered, but scarcely attached to each other, by very soft lymph in patches and sheets; larger masses of lymph were attached to the convex surface of the liver. The liver itself was pale, as also the heart, spleen, kidneys; lungs healthy. The entire peritoneal surface was re-

markably pale. The uterus was very large, its serous surface pale and having a puffy appearance. The muscular tissue of the organ was pale but not softened, nor was there any pus in its substance. The ovaries were large, particularly the right, which contained beneath its surface and in its substance minute deposits of pus. No pus could be found in the veins of any part, nor any evidences of inflammation of these tubes.

PHILADELPHIA, August 1st, 1845.

ART. IV.—*Analysis of an “Official Report to the Surgeon-General, U. S. Army, on the use of large doses of Sulphate of Quinine in diseases of the South, with notices of the Climate and Diseases of Florida, &c. &c., by JOHN E. PORTER, M. D., Assistant Surgeon, U. S. Army.”*

THE report of Dr. Porter is one of a series of official reports which were elicited from the medical officers of the army by a circular issued from the office of the Surgeon-General in the month of August, 1843, with the object of collecting observations on the use of sulphate of quinine in large doses, which was known to be a common and increasing practice in Florida and the south-west, and a subject of much interest to the medical profession at large.

An estimate of the extent of Dr. Porter's experience in diseases of the south may be formed from his reply to the 1st question of the circular.

“ In summing up my experience in the diseases of Florida, the number, character and variety of the cases during three summers' service at various points in the peninsula, from its commencement at Fort White in 1839, to its termination with the yellow fever at St. Augustine in 1841, are to be taken into consideration. I am unable to enter upon the statistics of my southern service, farther than to say that the whole number of cases treated by myself in Florida alone, is not much less than 2500. This includes unenlisted persons as well as soldiers of the army. Of this number, more than 1800 cases were of strictly climatic disease. The practice of giving large doses of quinine in fevers was fairly tried at Fort King in the summer of 1841; the number of cases at this post alone being sufficient to afford considerable experience in the treatment of disease, and the effects of remedial agents. From the month of March to the middle of August, when I left this post, 995 persons were taken sick, of which number no less than 946 were strictly climatic disease, and of these 687 were cases of fever. From the 20th of April, when the epidemic broke out, to the 10th of August, a period of four months, there were taken sick of enlisted and unenlisted persons 935, of which 886 were cases of climatic disease. Whole number of deaths four. Of these fatal cases, two were congestive

fever; one of acute dysentery, brought in from the field after several days' continuance; and one, a mild remittent fever, was fatal from exposure to a heavy rain, whilst the patient was under the influence of mercury. But one of them was treated by large doses of quinine—a terrible case of congestive fever, brought to the hospital moribund. At this post there was a fair chance of testing the effects of quinine in large doses, which was not neglected; and I can confidently add the testimony of my experience to that of the able officers of the department who adopted this plan of practice with success."

Before entering upon a description of the diseases encountered in Florida, the geological character of the peninsula is discussed at length, together with the peculiarities of climate calculated to engender disease. A geological sketch of the territory by James Pierce, Esq., quoted from Silliman's Journal, is particularly apt and concise.

"A rolling tract of comparatively elevated ground, a continuation of Georgia and Alabama ridges, passes in an eastern direction through the centre and northern part of West Florida, thence bends to the south-east into East Florida, dividing the waters that fall into the St. John's and Gulf of Mexico, and terminating between the Bay of Espiritu Santo and Charlotte Harbour, and occupying in Florida an average of about 30 miles. This rolling district is principally of secondary formation. Numerous sinks, caves, and subterraneous water-courses peculiar to calcareous tracts, indicate a basis of limestone, and it is probable that this is the basis of most of the hilly districts of Florida.

"The savannas and prairies of the interior are grass-covered plains, without trees or shrubs, and in the rainy season often partially covered with water, but generally sufficiently dry and firm to support cattle. They often contain pools of water, and some of these basins were probably beds of lakes, and have been gradually filled up by clay, sand, and vegetable mould washed from the hills. The soil of the pine barrens, situated in the interior, is almost uniformly fine sand with a thin dressing of vegetable earth, and sufficiently compact for roads. In some places it rests on clay, but generally at a considerable depth.

"The seaboards and southern portion of East Florida are mostly alluvial. The north-eastern part of the peninsula, between the head waters of the St. Mary's, the river St. John and the ocean, varies little in surface, soil and vegetable productions, from the coast of Georgia, and is generally very level.

"Large swamps and hammocks, or dense groves, containing a variety of trees of annual and perennial verdure, are insulated in this generally pine barren region, ranging parallel with the ocean or bordering on streams. Some of the large hammocks are dry part of the year, and have a deep vegetable soil based on rich marl, but it is doubtful whether they can be cultivated, as in the rainy months of June, July and August, when crops are on the ground, the swamps are filled with water which falls in torrents, and slowly drains from the flat surface of the country."

The nature of the limestone formation gives rise to another phenomenon which is not uncommon in Florida. Considerable streams and lakes disappear subterraneously, leaving tracts of land before submerged to be acted

upon by the sun's rays. This was the case with Lake Tuscawilla, near Micanopy, which suddenly disappeared in 1838, in the course of a single night; and Orange Lake has been running off in a similar manner for some years, leaving thousands of acres of drained land. Such phenomena must exercise a great influence on the salubrity of the surrounding country, especially when it is considered that what was once the bottom of a lake is annually saturated with water during the rainy season, and subsequently exposed to a high temperature. The numerous "*lime-sinks*" and "*bay-galls*" throughout the country exert a similar influence. As in all limestone and alluvial regions, the water is of bad quality. Dr. Rush says, "there can be no doubt of the predisposition to fevers being increased by the use of impure water." In many parts of the territory the beds of the rivers and springs are composed of stratified and porous limestone, and the water taken from them, after standing a few hours, deposits a copious limestone sediment. These streams are swollen to a great height by the rains, and become very low during the dry season; another fertile source of malaria.

The rainy season usually commences in May, and gradually terminates about the end of August or in the early part of September. The rains are not continuous; the frequent torrents during the day being quickly succeeded by a burning sun; for, during the whole season, the mean atmospheric temperature, as indicated by the thermometer, is not less than 80° on the sea-coast, as observed at St. Augustine and Tampa Bay; the mean summer heat of the former being 80·65, and of the latter 80·42. In the interior it is still hotter, the mean summer temperature being 82·35. For a long time after the cessation of the rains, or until the brief winter commences, there is great humidity of the atmosphere. From the extensive ponds, swamps, hammocks and savannas exposed to a high temperature, constant exhalations arise during the day, and are precipitated at night in heavy dews. Soon after sunset every one is sensible of the great dampness of the atmosphere, and at all seasons of the year it is sufficiently obvious to the senses that the air is more humid than in the more northern sections of our country. Even in winter the deposition of dew is very great. For six months in the year the lowest monthly mean temperature is 70° Fahr., and the highest 85°; a degree of heat, which, conjoined with the extreme humidity of the atmosphere, is highly favourable to the process of vegetable decomposition. Another source of disease in Florida is an uniformly high *dew-point*. Meteorological observations have not as yet furnished incontrovertible data to prove this assertion, yet the languor of the mind, the debility of the muscular system, the state of the skin, the general depression, and the close sultry weather which is always experienced to a greater or less degree during the hot season, afford ample evidence of the fact that with a high temperature there is also, in Florida, a high *dew-point*. The influence of this circumstance upon the system, and

its agency in the production of febrile disease, are ably illustrated by the language of a recent writer (Dr. C. A. Lee).

"The state of the dew-point exerts far greater influence upon animal bodies, especially in the production of disease, than temperature itself. This arises chiefly from the circumstances that a high state of the dew-point interrupts, to a greater or less extent, the healthy function of the skin and lungs—two of the most important organs of the body. I maintain that perfect decarbonization of the blood cannot take place in the lungs with a high dew-point, and consequently that the vital fluid cannot receive a sufficient quantity of oxygen to fit it for the various offices which it is designed to perform in the animal economy. An atmosphere with a high dew-point, moreover, rapidly carries off the vitreous electricity, which is doubtless intended to subserve an important end as a vital stimulus. We find, accordingly, that highly malignant fevers do not prevail where the dew-point is below 60°. The same is true of malaria. If we seek for the cause of the excessive fatality of tropical diseases, we shall find it in a dew-point of 70° or 80°. Evaporation from the surface of the body is either checked, or the 53 ounces of fluid given off from the skin every 24 hours, with a moderate dew-point, are disposed of through some different channel, constituting a material derangement of the animal economy. * * * * The daily range of the dew-point in the U. States is much greater than in Great Britain and the other European countries, and to this I attribute our greater liability to febrile disorders. At the island of St. Vincent we need seek no other cause for the extreme unhealthiness. On the table lands of Columbia, under the equator, and in Mexico, the dew-point corresponds very nearly with that of our own latitude, as does also the mean annual temperature, and the inhabitants enjoy an equal degree of health. In Havana, Vera Cruz, and all other places where the yellow fever or other high grades of bilious fever are prevalent, the mean state of the dew-point is very high.

"A high dew-point not only gives efficiency to malaria by checking its elimination from the system, but it acts also by preventing the separation of carbon by pulmonary and cutaneous transpiration; hence the increased biliary secretion in hot climates."

With this combination of circumstances it is not difficult to account for the prevalence of malarial disease in Florida; a dead level and a half drained country alternately drenched with rains and broiled by an almost tropical sun—reeking with the steam from ten thousand swamps, lagoons, bogs and savannas—would furnish ample materials for vegetable decomposition and miasmatic effluvia.

But the decay of vegetable matter is not the only source of malaria. Dr. Heyne, of Madras, is of opinion that the geological nature of the soil is one of the most powerful causes of the "*hill fever*" of India, and that the ordinarily received opinions as to the vegetable or marshy origin of fevers will not here hold good. Dr. James Johnson has "ever considered the geological nature of the soil as one of the most powerful of the causes of physical climate." Even in countries as barren as the sands of Florida, miasmatic fevers, or at least fevers similar to those produced by miasma, have been exceedingly common. Sir Gilbert Blane describes the soil of

Walcheren as "consisting of fine white sand, known in the eastern counties of England by the name of 'silt,' and about a third part of clay." It was after a hot and dry summer, also, that the British army suffered in that island from the endemic fever, to a degree almost unprecedented in the annals of warfare. "In August, 1794," says Dr. Ferguson, of the British army, "after a very hot and dry summer, our army in Holland encamped at Rosendal and Osterhout. The soil, in both places, was a level plain of sand, with perfectly dry surface, where no vegetation existed or could exist, but stunted heath plants. It was universally percolated to within a few inches of the surface with water, which, so far from being putrid was perfectly palatable. Here, fevers of the intermittent and remittent type appeared among the troops in great abundance." Dr. Watson, after quoting Dr. Ferguson as above, adds: "For producing malaria, it appears to be requisite that there should be a surface capable of absorbing moisture, and that this surface should be flooded and soaked with water and then dried; and the higher the temperature, and the quicker the drying process, the more plentiful and virulent is the poison that is evolved."

Dr. Lind also enumerates as one of the signs of an unhealthy country, "a sort of sandy soil, commonly a small, loose, white sand, such as that at Pensacola, Whydah and the island of Buonavista, which is found by experience to be injurious to health;" and Dr. Parsons remarks that Pensacola seems to be rendered unhealthy by its sandy and barren soil.

It was a matter of surprise to many that fevers were often prevalent in the barren and sandy portions of Florida during the existence of Indian hostilities; but the above facts, in connection with the geology of the territory, are abundantly sufficient to explain their cause.

Malaria is, then, the great primary and specific cause of most of the diseases of Florida. It may be introduced into the system through the respiratory passages—by absorption into the pulmonary circulation, or by means of its effects on the ganglial nerves of the lungs, through the fauces, the olfactories, the stomach and the cutaneous surface. Its action on the system is considered to be that of a *general sedative* and a *local irritant*. The earliest influence of the poison is sustained, most probably, by the nervous system; yet the connection of the latter with the vascular system is so intimate, that it must remain a matter of doubt, in the present state of our knowledge, which of the two receives the first impulse to morbid action.

In either case it is certain that a depression of the vital forces is the invariable result of exposure to the climate of Florida; hence the adynamic condition of system, the disposition to congestion of the head and abdominal viscera, and to general venous congestion, which characterize all cases of disease (except those occurring in healthy recruits, fresh from the north), and which could only be attributed to impaired energy of the brain and nervous system. In no form of disease is this depression of nervous energy more obvious than in congestive fever; and as all fevers of malarial

origin, intermittent, remittent, and dysentery, partake more or less of this character, it follows, that the different grades of malarial disease, from the slight depression and congestion of a mild intermittent, to the overwhelming manifestation of disease in the most grave case of congestive fever, have certain symptoms in common, which vary in proportion to the intensity of the poison.

After a very short residence in Florida, the first announcement of the climatorial influence upon the system is a prodigious increase of perspiration, and at the same time an increased and vitiated secretion of bile, constituting the *cutaneo-hepatic sympathy* of Dr. James Johnson. The digestion is, at the same time, impaired ; and the lungs are hindered in their function by the quantity of moisture in the air. The temper becomes irritable, and there are shooting pains in different parts of the body, often doubtful in their character even when experienced by a physician, whether they proceed from rheumatism, or neuralgia from the action of malaria, until a paroxysm of fever removes all uncertainty. The face becomes pallid and sodden, often communicating a greasy feel to the fingers. The circulation is languid, easily excited or thrown off its balance, and there is great tendency to venous congestion. The secretions (excepting the bile and perspiration), are all diminished; particularly the urine, which becomes scanty and high-coloured. Still later there is a sensation of weight or dragging in the region of the liver, often so great as to render it distressing to ride on horseback, or to walk at a rapid pace ; caused, most probably, by engorgement of the portal circulation; and at the same time there is constipation. Then comes, many times in the course of a few hours, a great change in the urine, which is still less in quantity than before, and of a dark-red or brick dust colour ; and when this appearance presents itself, an attack of fever is not far off; especially as there is frequently, at the same time, a cessation of the profuse perspiration.

"Many such cases," says Dr. Porter, "occurred within my observation in Florida, and I also experienced the same train of symptoms in my own person, previous to an attack of fever in 1839 ; having left the extreme north in June and plunged into the interior of the territory in July of the same year. And although many do not experience all of these symptoms, I am persuaded there are few cases of fever in which most of them do not previously make their appearance in a greater or less degree. The two main symptoms of approaching fever in an already disordered system are the sensations in the right hypochondrium, denoting an engorged condition of the liver, with derangement of its functions, and the change in the urine to a very dark red. When both of these are present, they are never-failing signs of a supervening febrile attack, and the change in the urine nearly always occurs.

"In those persons who begin their residence in the country at the commencement of winter, the signs of approaching disease in the subsequent

sickly season may not be quite so well marked as has been described, but they are nevertheless sufficiently prominent."

After a person has passed through one attack of fever in this climate, there seems to be a great change in the system. The florid complexion brought from the north is succeeded by a permanent paleness, and there is torpor of the extreme vessels, denoted by the cessation of the profuse perspiration, and the difficulty of procuring even a natural secretion from the skin. There is torpidity of the liver; a weakened state of all the organs concerned in the process of digestion and muscular debility. The system is extremely susceptible to atmospheric vicissitudes, and the influence of diminished temperature, so that a slight change in this respect is sensibly felt, the cold of the mild Florida winters affecting one quite as unpleasantly as the severe winters of the north the more robust inhabitants of those regions, and warm clothing is just as necessary. It is a common remark amongst northerners that they suffer as much from cold in Florida as at home. The winters, moreover, are too short for the system to recover its energies; and exposure to the noxious agents of the climate during the long summers, and it may be, to repeated attacks of fever, are too debilitating in their effects to admit of restoration in the brief period allotted by nature to a Florida winter. At the beginning of another hot season, the same causes are again in operation, diminishing still farther the vital energies; and disease, produced by malaria, always liable to recur, will partake of the adynamic character to a still greater degree than before. Thus, the difference between the fevers of newly-arrived recruits and those of old soldiers who had served two or three years in the country, was obvious.

Atmospheric vicissitudes constitute most frequently the *immediately exciting* cause of febrile attacks, as well as of diarrhoea and dysentery. A resident of Florida, debilitated by exposure to malaria and continued moist heat, is far more sensitive to slight changes of temperature than an inhabitant of the north. The perspiration and biliary secretion being in excess during the intense heat of the day, are the more liable to be checked by the damp chills of the night, for it is not uncommon for a thick blanket to be required for covering in the course of a single night in summer, although the preceding day may have been exceedingly warm. This is a consequence of the excessive moisture of the air, and not to sudden or great changes of temperature, for the climate of Florida is more equable than any other portion of the territory of the U. States, excepting, perhaps, the western portion of Oregon.

There is a cold land-wind from the N. W. which prevails frequently during the autumn, though sometimes also in the spring of the year, which is considered by Dr. Porter as one of the immediate exciting causes of disease, and also a source of aggravation for that already existing. This was remarked during the fall of 1839, when the yellow fever prevailed as an

epidemic at St. Augustine and Tampa Bay ; and at the same time bilious remittent and congestive fevers were much more severe in many parts of the territory than before its occurrence. At Ft. King, also, in April, 1841, fever of a very high grade broke out during the prevalence of this wind, and in the month of October, of the same year, the yellow fever at St. Augustine was much more malignant and fatal whilst it prevailed.

It has been remarked that all the various forms of miasmatic disease, which occur in Florida, exhibit certain symptoms in common. That the identity of their cause is manifested in the different forms of disease to which it gives origin, is confirmed by the fact that one remedy exerts a curative influence over all. Remittents and intermittents are so nearly alike in all points, and run into each other so readily, that they may be viewed as the same disease. Congestive fever in some cases is an irregular remittent—in others an intermittent of one paroxysm. When dysentery is accompanied by fever—that fever always assumes the remittent type, and simple diarrhoea is in most cases the result of the action of the miasmatic poison upon the nervous centres, which preside over the functions of digestion and assimilation. If, then, we possess a remedy which controls all these diseases, the inference is fair that they arise from a similar cause; and moreover, that this remedy is capable of neutralizing this source of morbid action, and, in a greater or less degree, all the forms of disease of which it is the origin. That we do possess this remedy in the sulphate of quinine would seem probable from the experience of Dr. Porter.

Before entering upon a description of the various forms of disease, in which the beneficial effects of large doses of quinine were first observed, it would be well to show the estimation in which Dr. Porter holds the various remedies ordinarily employed in the treatment of southern fevers. And first of *venesection*. This was found universally and decidedly injurious, except in robust recruits recently arrived from the north, who were not yet influenced by the climate—and in these it was *rarely* required, and *never* in a second attack of disease in the territory. The strongest and stoutest subjects showed so little vital force and tonicity of fibre, so little recuperative energy that general bleeding,—however much it might seem to be indicated in the ordinary mode of practice, and however greatly it might temporarily relieve prominent local symptoms—was invariably followed, sooner or later, by their return with increased severity, by increased adynamia, and protracted and doubtful convalescence.

Local bleeding, on the contrary, was very generally attended with benefit.

Emetics were not much used; the gastric irritation present in nearly all cases of fever, was of too intense a character to warrant their employment, and prostration was too easily induced.

Cathartics were always beneficial. Soldiers, as a general rule, bear purgative medicines better than any other class of persons; but in the diseases of this country every age and sex required them at the commence-

ment, on account of the constipation, and also to correct the action of the liver, and to remove irritating secretions from the alimentary canal. They were also useful in equalizing the circulation by relieving the local congestion always in some degree present. When the stomach was quiet, 8 or 10 grains of calomel, followed by ol. ricini, was the best medicine of this class, acting efficiently without producing irritation. With an irritable stomach 15 or 20 grains of calomel, *per se*, was the only article that could be retained, assisted in the course of a few hours, by laxative enemata. After one cathartic at the outset of the disease, mild ones, or laxatives only, were in general required.

Diaphoretics and *alteratives* were often necessary before the administration of quinine, especially in the cases of robust recruits. In these cases, when the tongue remained dry, the skin hot, and when these remained, pain of the head, or a full pulse after the operation of a cathartic, the quinine was inadmissible, and calomel combined with pulvis antimonialis, or acetate of ammonia with sp. $\ddot{\text{a}}$ theris nitrici repeated frequently, were useful remedies. In some cases the acetate of ammonia proved repulsive to the stomach, a small dose producing emesis more promptly than a full dose of any emetic. In giving calomel, care was taken not to continue it too long, for ptyalism in this climate was always hurtful. Ipecacuanha, in small doses, as often as the stomach could bear them, was in many cases advantageous. Nitrate of potash was rarely beneficial. The other neutral salts, effervescing mixtures, &c., were frequently useful in allaying gastric irritability. So soon as the tongue became moist it was generally best to commence the quinine in decided doses,—if necessary, combined with calomel, pulv. antimonialis, ipecac., capsicum, &c. &c.

Opium and its preparations were valuable medicines. Sulphate of morphia, in the dose of $\frac{1}{4}$ or $\frac{1}{6}$ gr. at night, rarely failed in allaying the nervous irritation which is almost always present in these miasmatic diseases, especially after a severe paroxysm of fever, followed by profuse sweating. It was combined frequently with quinine, calomel, antimonial powder, or ipecac.; opium was used with great caution in certain cases of fever attended with great congestion, livid lips, &c.

Capsicum is considered by Dr. P. a most useful adjuvant to quinine in the treatment of Florida fevers, and second only to it in power. It seems to stimulate the stomach, in fever, to digest and assimilate the quinine, and has produced excellent effects in diarrhoea and dysentery in combination with quinine, opium, &c. &c.

Diet, &c. Mild mucilaginous drinks, such as gum Arabic, barley water, and thin arrow root were freely used, in fever cases, to afford nourishment and allay thirst; sweetened cream of tartar solution was also a good drink; but the best article of the kind was tamarind water, which rarely disagreed with the stomach, and was always grateful to the patient. On the contrary, the acid of the lime and lemon, as well as tartaric acid, often produced pain

and gastric uneasiness; and if, after taking them, the contents of the stomach should be rejected, they were frequently so very acid as almost to excoriate the fauces. It was a common practice, after a paroxysm of fever had fairly subsided, when the patient had been dried of the profuse sweat, which had drenched him from head to foot, his shirt changed, &c., to give a bowl of beef tea, or light chicken soup, thus supporting the system and preparing it to encounter another paroxysm of fever,—unless by the immediate use of quinine, capsicum, &c., this could be prevented. By the timely administration of a little nourishment, many a patient has been saved. A strict, long-continued, antiphlogistic regimen, in these Florida fevers, never failed to produce injurious effects.

Dr. Porter's practical acquaintance with the diseases of Florida commenced at Port White—an unhealthy post situated on a branch of the Suwanna river,—in the summer of 1839, immediately on his arrival in the territory. This post was garrisoned by troops debilitated by long service in the climate, and early in the season they had suffered much from sickness. Depletion was badly borne by them. Local bleeding, moderate mercurial cathartics, sinapisms, and an early resort to quinine and capsicum, was found safe and sure practice. The cases which recurred in the chilly weather of October and November were more severe than those of the previous months, and yet one death from congestive fever, and another from cholera infantum, were the only fatal cases—a result which is ascribed “almost entirely to the use of quinine in *pretty large doses* (8 and 10 grs.) early in the disease.”

The summer of 1839 was very unhealthy throughout the country. Fevers of a high grade prevailed extensively in the interior, and the yellow fever on the sea-board.

The year following, 1840, was remarkable for the duration of its rainy season. Nearly 90 inches of rain fell at Tampa Bay during the year. At the beginning of winter the whole country was saturated, and the low grounds overflowed. The southern portion of the peninsula was so completely under water in the month of February, 1841, that an expedition in the direction of the Kissimmee was rendered abortive, and compelled to return, having effected nothing. The summer of 1840 was, therefore, comparatively healthy, and there was no such sweeping epidemics as in the previous hot season; yet very generally sickness prevailed amongst the troops in the interior. Dr. Porter was stationed during this summer at Tampa Bay, on the western coast of the peninsula, a post which served as a depot for the sick of the regiment on duty in Middle Florida (1st and 6th infantry). Here, in the latter part of the season, fever cases were very numerous, and diarrhoea and dysentery particularly troublesome and intractable. For the latter, combinations of opium, calomel, &c., with quinine and capsicum, were found most useful. As the idea has obtained currency that these bowel affections might have been caused, or aggravated by the liberal use

of quinine, it is remarked, at this time, when they were so obstinate, and universally prevalent amongst the troops who had been lying amidst the malaria of the Suwannee, that large doses of quinine had not been employed in the treatment of the fevers which had been so rife in that encampment; nor did the use of quinine afterwards, at Tampa, appear to aggravate them; on the contrary, it was found exceedingly beneficial.

The whole winter and spring succeeding the rains of 1840 were uncommonly dry; and the month of March and the early part of April were also exceedingly hot, causing rapid evaporation from the earth's surface, and a corresponding generation of malaria. This will account in a great measure for the severe and very general sickness which prevailed throughout the peninsula during the following summer.

Fever broke out at Fort King, in the interior, where Dr. Porter was stationed, about the 20th of April, and from this period there was no cessation of sickness until the frosts of autumn. For the first few days after the epidemic appeared, it was common for eight or ten of the men to be taken on the *sick report* daily, and, in a short time, the whole command, consisting of four companies of the 2d infantry, were entirely prostrated. Before the end of June almost every man, woman, and child at the post had suffered from fever, and many of them from *two* or *three* attacks. The ostensible exciting cause of this epidemic was a sudden change of weather. No unusual sickness occurred until after the 21st of April. On the morning of that day there was a hard rain, with a tremendous storm of hail, thunder and lightning, followed by cold weather. The nights, mornings, and evenings were severely cold from this time till the end of the month; flannels were resumed, great coats were necessary at night, and good fires were as comfortable as they ever were in the coldest month of winter, although the thermometer had been as high as 89° in March, and 92° in April.

At the commencement of the epidemic the cases were generally severe, particularly among the recruits, a number of whom had arrived from the New York depot late in the autumn previous; and almost every one of these men was attacked in the course of a few days. In these men, who had previously enjoyed good health, the fever, in many cases, nearly approached the continued type—the remissions being incomplete and often very indistinct. There was considerable arterial action; skin dry, and hot; tongue coated, and frequently becoming brown,—or dry, red, and glazed; great thirst; frequently tenderness of the epigastrium; pain of the head, and lumbar region. Some of the cases were attended with stupor or delirium at night; and the majority showed decided symptoms of gastric irritation. General bleeding in these cases was not so necessary as it would have been in similar cases at the north, though having been exposed but for a short time to the morbid influence of the climate, they were still in a very different condition from the old soldiers who had been two or three years in the country; and the success without this measure was fully equal

to what could have been anticipated, for, out of 270 fever patients taken sick in April and May, there was but one death. But these recruits did not bear quinine like the old soldiers of the Florida army, or as these same patients did a few weeks afterwards. Simple remittent, in those who had undergone repeated attacks of the disease, often made its appearance with a sudden chill, and after a short time ran into the hot stage, finally terminating in profuse sweat. Sometimes there was little or no cold stage, the patient at once finding the hot stage upon him; and frequently the sweating stage amounted only to a partial perspiration. In all these cases there was considerable gastric irritability, which frequently subsided as the fever abated. A full dose of calomel was generally given as soon as it could be retained by the stomach, and its operation was assisted by enemata—which also allayed the gastric irritability. As soon as the medicine had operated, 10 or 15 grains of quinine were given, and 5 or 10 grains more, according to the urgency of the case, in four or five hours,—the dose to be repeated at such intervals as were deemed advisable. The quinine was given alone or with infusion of capsicum, and in some cases the capsicum was given alone every hour or two between the doses of quinine.

The gastric irritation, which is so prominent a symptom in these fevers, amounted almost to inflammation amongst the recruits; in many cases the tongue was dry and glazed, in others it was red at the edges with enlarged and reddened papillæ, with frequent retching and much tenderness and uneasiness at the epigastrium. In some cases the tongue appeared to part with a thin coat of its own substance when the brown dry fur was thrown off, remaining dry, red, and glazed, and becoming more moist, and less red, as the disease yielded. In a few instances, on becoming cleared of the thick brown coat, which usually appeared in the earlier stages of the disease, the appearance of the tongue resembled a bit of bullock's liver—and these were not only the worst and most dangerous cases, but their recovery was always tedious.

Large draughts of warm chamomile tea sometimes calmed the stomach very effectually; but free cupping to the epigastrium, premised by a large sinapism, and followed by an emollient cataplasm, and later by blisters, was generally required: this treatment was greatly assisted by minute doses of calomel, and enemata of salt and water. In a few of these cases, however, the calomel seemed to exasperate the gastric symptoms, increasing the tenderness at the epigastrium, and dryness of the tongue; these, for the most part bad cases, and attended with torpor of the stomach, were most successfully treated by ipecacuanha in divided doses. It is a remarkable fact, however, that the very best remedy for excessive irritability of stomach was often a full dose (15 or 20 grains) of quinine with capsicum.

Gastric symptoms in old soldiers, on the contrary, were much less intense; the tongue being frequently neither red nor coated, and sometimes perfectly healthy. In them it was apparently caused by direct loss of tone in the

stomach, as stimulants were almost invariably successful in procuring relief—and the best stimulant of all was the combination of capsicum and quinine. "I have often known," says Dr. P., "a dose of 15 or 20 grs. of quinine in solution, with an ounce of strong infusion of capsicum, to allay this kind of gastric disturbance so as to enable the stomach to bear a large dose of calomel without difficulty. There was this advantage in the use of this medicine: if it were not retained, no harm resulted from the trial, for the patient might as well vomit up this mixture as any other, and better than to be tormented with violent retching without bringing up anything whatever."

It must be recollect~~ed~~ that *ice*, that most useful *medicine* in the gastric irritability of fever, was not to be obtained at Fort King. When the quinine and capsicum were rejected, an ounce of strong infusion of capsicum, alone, would frequently remain upon the stomach, and after a few doses of this, a full dose of quinine would generally be retained, and could afterwards be retained as often as necessary. If the capsicum was rejected, resort was immediately had to small doses of calomel, &c., always administering the quinine as soon as practicable—which never failed when its effects could be procured. When there were no signs of mercurialization, the small doses of calomel were often continued in combination with the quinine.

In those cases where the febrile heat rose rapidly to a state of great intensity, accompanied by great thirst, great pain of the head and lumbar region, and anxiety and distressing sense of weight at the praecordia, advantage was taken of the first remission, however slight, to prevent a second paroxysm, which was apt to be more violent than the first, and often dangerous. Free cupping to the epigastrium and whole length of the spine, with sinapisms and stimulating pediluvia, were immediately resorted to, and a large dose of calomel was given, followed by ol. ricini, mild purgatives or enemata, and as soon as the bowels had been freely moved, 15 or 20 grs. of quinine with capsicum were administered. When there was considerable tendency to remission, and the medicine had not operated, quinine was given, with cathartic enemata. But when there was great determination to the head, amounting to congestion, indicated more by stupor or somnolency, than by pain of the head alone, it was advisable to procure free alvine evacuations before administering the quinine. When the forehead was hot and dry, cold water was freely applied.

When the brain was the organ most implicated in the disease, thorough and repeated cupping from the forehead and temples, and more particularly from the cervical spine, was important. Mustard and capsicum pediluvia; full doses of calomel, with senna and salts, and afterwards divided doses of calomel, ipecac. and pulv. antim.; blisters from the occiput to the first dorsal vertebra, and, later in the disease, to the limbs and extremities, were freely used. So soon as the pulse had softened, and the tongue inclined to become

moist, particularly if the gums gave evidence of the mercurial influence, quinine was commenced, and in decided doses.

There were some cases with intense fever, violent cephalalgia, uneasiness of the right hypochondrium, pain in the epigastrium, sometimes delirium at night; great thirst, excessive irritability of stomach; a clean tongue at first, afterwards covered with a yellowish slime, and finally turning to a dark-brown colour; yellow tinge of the skin and tunica albuginea, and great constipation. In these cases, which were evidently complicated with great derangement of the stomach and liver, even if there was not the slightest tendency to remission, or perceptible mercurial influence, if the patient was even growing worse, with biting heat of the body, and cold extremities, great praecordial anxiety, and very frequent pulse; whether there was thirst or otherwise; whether the irritability of stomach had subsided or not; even if there were decided dryness of the tongue, and headache, the administration of quinine was no longer delayed. Twenty grains were given for the first dose, and repeated as often as the case demanded; under its use the stomach became calm, the tongue moist, and the skin regained its equability of temperature.

In an official report for June, 1841, Dr. P. uses the following language:

"In cases of fever where the secretions are somewhat corrected, and the bowels moved, but there remains a warm, dry skin, giving a kind of prickly sensation (*calor mordax*) to the fingers, with a frequent pulse, thirst, and jactitation, large doses of quinine (10, 15 and 20 grs.) must be resorted to without delay. If the tongue be dry, calomel may be given at the same time; but the quinine alone will frequently produce moisture on the tongue, and almost always on the skin,—a slower, softer and better pulse,—and almost immediate convalescence in the patient. Small doses of quinine, in these cases, are not to be relied upon; they are frequently injurious,—producing more thirst, pain of the head, and dryness of the tongue, and exasperating the febrile excitement."

In describing the aggravated forms of remittent fever which occur in the paludal districts of hot climates, Dr. Eberle (Pract. Med., vol. i, p. 130), gives a very good idea of the fevers of Florida. After enumerating the various symptoms in the order of their occurrence, he concludes: "In this way the paroxysms continue to recur, until either a salutary crisis or death takes place—one or the other of which not unfrequently occurs in the third paroxysm."

The termination described by Dr. Eberle no doubt follows the ordinary treatment in such cases, but it was rarely met with in Florida. Here the first and most important indication was to secure a remission, and however slight this might be, advantage was taken of it to administer 20 or 25 grs. of quinine; if this was retained the dose was repeated in a few hours, in which time the case put on a different aspect, and convalescence was immediate and invariable. If there was time to secure the action of a

mercurial cathartic it was well, but in urgent cases this was not regarded, as it was absolutely necessary to prevent the access of another paroxysm, and nothing but a large dose of quinine would effect this object with certainty.

This then was the essential difference in treatment between that recommended by Dr. Eberle and the practice in Florida; instead of endeavouring to procure a decided remission of the disease by the ordinary means of cathartics, mercurials and diaphoretics, with the view of exhibiting quinine in small doses, *when it could be borne*, as a *tonic* of doubtful, peculiar, and somewhat mysterious power, this remedy was given in ten times the ordinary dose, early in the disease, and in urgent cases without waiting for a remission, as *the certain antidote* to the miasmatic poison—the stomach was forced to receive it by means of capsicum or revulsives, and the result was always such as to justify the practice. The termination by *crisis* was created, rather than awaited, and the alternative death rarely occurred when there was sufficient vitality remaining to react under the influence of a full dose of quinine.

During this very unhealthy season whilst remittent fevers were so universally prevalent, it might be well supposed that intermittents, in every variety, were neither "few nor far between." *Tertians* were, in general, easily broken up, there being but little danger, under proper treatment, of their running into the remittent form. The bowels were regulated, and there was, in most cases, little necessity for medicine until just before the expected paroxysm. If this were anticipated at 10 o'clock, A. M., for example, 20 grains of quinine would be ordered at reveille, (sunrise,) and at 8 o'clock A. M., 10 grains more in combination with capsicum, or tinct. opii, if required; in the vast majority of cases this alone was sufficient to stop the expected paroxysm, and to break up the disease.

Quotidians were extremely liable to assume a remittent form after the first paroxysm, and consequently the treatment was commenced early, in order to cut the disease short at its outset. Thus, during the first paroxysm, as soon as the nausea subsided, the bowels were freely moved, and as soon as the intermission appeared, 20 grains of quinine were given at once, and the effect was kept up by a repetition of the dose until after the time had passed for a return of the paroxysm.

In patients debilitated by frequent attacks of fever, a few grains of *pipерине*, in combination with the quinine, was useful, though it was not found superior to the *capsicum*; and, after the paroxysms were arrested, it was often usefully combined with some tonic remedy. Among the tonics employed after the quinine had produced its effect, the cinchona in substance, Huxham's tincture, the tincture of the sesquichloride of iron, and other bitters, were used with decided benefit. A very good tonic was prepared from the rind of the bitter orange and the bark of the *Prunus Virginianus*—both indigenous productions, in combination with gentian, columba, quassia and

serpentaria. An infusion was made of these ingredients, and a sufficient quantity of brandy added to prevent fermentation. A wineglassful of this preparation three or four times a day, after the fever was broken, was found to produce an excellent effect, in giving tone to the system, and allaying the nervous irritability so conspicuous in all cases of continued malarial disease.

Dr. Porter closes the medical history of the summer of 1841, at Fort King, by the reports of cases which follow. "My notes," he says, "were taken at the bedside of the sick, and, if they possess no other merit, are strictly correct. I have often since regretted that I had not recorded notes of more cases, especially at an earlier period of my Florida service; but time could not always be spared, when suffering myself from disease, the hospitals were overflowing with sick, and there was no leisure by day or night for rest of body, or relaxation of mind."

"CASE I.—Private Bigelow, 8th infantry, was admitted into Hospital, Fort King, June 21st, 1841. He had recently been on a march between Tampa Bay and Fort King, and was well on his arrival. His case being regarded as one of common remittent fever, at this time very prevalent, and my time being wholly occupied, no notes were taken at the commencement, but the general plan of treatment resembled that employed in similar cases. From the prescription book of the hospital it appears that he took a mercurial cathartic when first admitted, and that sinapisms and cups were applied to the epigastrium, and sp. aetheris nit., liq. ammon. acet., and soda powders given internally, with tamarind water, mucilage, arrow root, &c., for diet.

"On the 23d, quinine was attempted (in doses of gr. ii—iiij), combined with pulv. antimonialis, but it produced headache, thirst and restlessness, and was discontinued.

"From this date to the 27th the treatment consisted of diaphoretics with small doses of calomel and occasional cathartics, with such other remedies as the case seemed to require. The use of quinine (gr. ij every second hour), was again attempted on the 25th, but was necessarily abandoned. On the 26th, it was noticed that the mouth was slightly affected by the calomel.

"*June 27th.*—The condition of the patient is as follows: mouth sore from the calomel; soreness principally confined to the palate and roof of the mouth, from which there had been hemorrhage during the previous night; pulse frequent and irritated; headache; thirst; skin moderately hot and dry; tongue not much coated. R.—Quiniæ sulphat. gr. ij secundâ quâque horâ c 3ss, inf. capsici.

"Acetate of ammonia was directed in the interval, but it produced nausea, and was replaced by sp. aetheris nit. Gargle for the mouth. Light chicken tea and arrow root for diet.

"*Retreat. 7 P. M.*—Heat and dryness of skin increased; pulse more frequent; headache; thirst, and great restlessness. There had been hemorrhage from the mouth to the extent of a pint (as was judged), of dark-coloured blood, and the pillows and sheets were smeared with it, as well as the lips, face, hands and shirt of the patient, which could not be kept clean. There was considerable nausea, caused most probably by the quantity of blood which had been swallowed during

the day. Gargles of borax, alum, and oak-bark had been used for the hemorrhage, without the least benefit. R.—Quiniæ sulphat. 3j, statim sumend.

“ 8 P. M.—Quinine has been retained; headache diminished, and restlessness also; pulse less frequent; slight moisture on forehead.

“ *Tattoo.* (9 P. M.)—Condition the same; slight general perspiration. R.—Tr. opii gtt. lxxx.

“ This was given on account of the restlessness which still continued in some degree, and for the hemorrhage and ptyalism. Half the dose was repeated at 10 o'clock, P. M.

“ *June 28th.* 1 A. M.—R.—Quiniæ sulph. 3ss.

“ *Reveille.* (5 A. M.)—Patient rather better; has slept since 1 o'clock; no further hemorrhage, and complains very little of soreness of mouth.

“ 7 A. M.—R.—Quiniæ sulph. 3ss.

“ 10½ A. M.—R.—Tr. opii 3j.

“ 2 P. M.—Is decidedly better and may be considered out of danger. Hemorrhage has ceased entirely, and mouth (according to the patient's statement), perfectly well; no headache; pulse regular and less frequent; no thirst, and a little appetite. The bedding and shirt of the patient had been changed, face and hands kept clean without difficulty, and in every respect a material change for the better had taken place. R.—Quiniæ sulph. gr. v., to be followed by a bowl of chicken tea.

“ *Tattoo.* (9 P. M.)—Symptoms continued favourable. R.—Tr. opii gtt. l. Repeat quinine (gr. v) at 9, and 3 o'clock, A. M.

“ *June 29th.*—Patient is decidedly convalescent. Ordered cathartic enema, and 5 grs. of quinine at 8, 12 and 4 o'clock.

“ *Tattoo.* (9 P. M.)—R.—Morphiæ sulph. gr. one-sixth. Continue quinine (gr. v) at 9 and 3 o'clock during the night.

“ It is unnecessary to follow the treatment further; the quinine was replaced by tonics, and mild laxatives were given as required. On the 2d July he was sufficiently recovered to be placed on half diet, and a few days afterwards was allowed to join his regiment.

“ A few remarks will be made in relation to the treatment of this case. The patient, on the 23d July, was getting decidedly worse; all the remedies deemed appropriate had been continued for some time, and it was evident that something more must be done. At this time the quinine was given in the hope that it would be tolerated, but it produced headache, increased thirst, and restlessness, and was necessarily discontinued. This effect of the quinine was undoubtedly owing to its frequent repetition in doses of two and three grains, which stimulated the system in such a manner as to add to the disease. Had 20 grains been administered at this time, for the first dose, followed in five or six hours by 10 grains more, the patient would, it is confidently believed, have borne the medicine as well as he did afterwards on the evening of the 27th. It is true the defective notes of the case do not show this, but my own recollection enables me to make the assertion as confidently as anything not absolutely certain can be affirmed. Had this been done, another advantage would have been

gained, the ptyalism would have been avoided, which, though not very severe, debilitated the patient as well from the hemorrhage, as from the mercurial influence on the system.

"Again, on the 25th, had large doses of quinine been resorted to instead of the small ones, they would, beyond a doubt, have put a stop to the disease. But, as if to contrast the futility of the small doses with the good effect of the large ones, two grain doses were attempted again on the 27th, the patient during the whole day getting worse, and being in a much more unfavourable condition at the close of the day than in the morning, when they were commenced, and the effect of the full dose of 20 grains at sunset of the 27th, when the patient was actually in a hazardous situation, showed the benefit of this practice, and how utterly useless small doses were in serious cases.

"The large dose of laudanum on the same evening was intended not only to allay the nervous agitation, but to check the hemorrhage resulting from the ptyalism, and the ptyalism itself. Its good effect was manifest in the speedy arrest of both hemorrhage and ptyalism in the course of a few hours. Perhaps the quinine had some influence in this result, but I am disposed to think that the opium was the principal agent.

"It is due to Surgeon Harney (U. S. A.) to state that so far as the writer is concerned, the practice of giving large doses of opium in ptyalism originated with him; and so large a dose would not have been exhibited in the present case had it not been for his precept and example. His practice for the last 20 or 30 years, as stated by himself, has been to give large doses of opium when there is a prospect of a severe salivation, at the outset, in order to prevent ulceration, and to cut short the disease. Taken in season, before ulceration has commenced, I have no doubt this can be done. Its employment in the present case was certainly attended by the happiest effects. Such doses are to be given as will decidedly narcotize and quiet the patient, otherwise the remedy is injurious. This was Surgeon Harney's practice, and I will here take the liberty of remarking farther, that the members of the medical department and the sick of the army owe him much for the determined manner in which he advised, *most strongly*, the use of quinine in *large doses*, in the fevers of Florida."

"CASE II.—Ann Gallagher, the wife of a soldier of the 2d infantry, was first seen on the evening of the 26th June, 1841. This woman had a severe attack of remittent fever in May last, and since that time has had several returns of intermittent. She has a child four or five years old, born since her recovery from the remittent. Complains to-day of slight chills, and fever since morning; skin warm; thirst; bowels constipated. R.—Massæ hydrarg. gr. x, Pulv. aloe gr. ij.—M.

"27th. 7 A. M.—Medicine has operated. Skin dry; pulse frequent and rather tense; some headache and slight thirst. R.—Quinæ sulph. gr. v.

"9 A. M.—Skin moist; headache less; pulse soft, and much slower. Quinine repeated in same dose.

" At 1 P. M., the patient experienced a regular paroxysm of fever preceded by a hard chill and followed by a profuse perspiration.

" 7 P. M.—Perspiration profuse; severe headache and frequent pulse. Cups were ordered to be freely applied to nape of neck; tamarind water for drink.

" 28th. *Reveille.* (5 A. M.)—Patient much worse. Severe headache, especially of the forehead and over the right orbit; pulse frequent and tense; skin hot and dry; thirst; tongue clean, with slightly reddened edges. Ordered sinapisms to nape of neck.

" 7 A. M.—Much the same. **R.**—Quiniæ sulph. gr. xv. Statim sumend.

" 9 A. M.—Skin moist; pulse much slower, and softer; headache nearly gone. **R.**—Quiniæ sulph. gr. x.

" *Tattoo.* (9 P. M.)—Has had no return of fever. Pulse soft and regular; pain of the head entirely gone, and succeeded by a sensation of *fullness* and a slight deafness—the effect of the quinine. **R.**—Ol. ricini $\frac{3}{4}$ ss.

" 29th. *Reveille.*—Medicine has operated. Patient is decidedly convalescent. To prevent a recurrence of the fever gr. x of quinine were ordered at 7 o'clock, A. M., and gr. iv at 9 o'clock, A. M.

" *Retreat,* (sunset.)—Entirely well with the exception of debility."

" Remarks.—The quinine should have been given on the 27th in the same quantity which was taken on the 28th. If this course had been pursued there would have been no paroxysm of fever on that day, and the risk of a confirmed remittent fever would have been obviated."

" **CASE III.**—Fort King, June 28th, 1841. Private Balch, 2d infantry, reported himself sick about 3 o'clock, P. M. Says he felt quite unwell at the same hour yesterday. Has headache, and some dizziness,—walking with an unsteady gait; pulse frequent; skin dry and hot; thirst; tongue clean; bowels regular. Having been just before relieved from duty in the sun, it was not certain that many of his symptoms, particularly the dizziness, were produced by fever, and he was therefore sent to the hospital without a prescription.

" *Tattoo.* (9 P. M.)—Rather more comfortable; pulse not so frequent; skin still dry. **R.**—Ol. ricini $\frac{3}{4}$ j.

" 29th, (8 A. M.)—Has had some sleep during the night; but the pulse is still frequent, the skin dry, and there is considerable headache. Medicine has operated. **R.**—Quinine sulph. gr. xv.

" 12 M.—Skin moist; pulse slow and soft; no pain of head; patient better in every respect. **R.**—Quiniæ sulph. gr. v.

" *Retreat,* (sunset.)—No change; quiet and comfortable.

" *Tattoo.* (9 P. M.)—Same; no return of fever. **R.**—Quiniæ sulph. gr. viij.

" 30th.—Rested well during the night, and is decidedly convalescent. **R.**—Quiniæ sulph. gr. v, ter in die."

" **CASE IV.**—Fort King, July 15th, 1841. Lieutenant D., 2d infantry, complained about 10 o'clock A. M., with frequent pulse, extreme heat of forehead and skin, and much thirst. Had an attack of intermittent fever during the previous month. **R.**—Hydrarg. chlor. mitis gr. x. To be followed by a Seidlitz powder at bed-time.

" 16th.—Medicine has operated freely.

"The fever increased at about 10 A. M. 1 P. M.—Pulse frequent; skin hot and dry; forehead extremely hot; pain of the head; thirst.

"3 P. M.—Slight attempt at perspiration, which soon subsided, and at retreat, the symptoms were the same as at 1 o'clock P. M., with the addition of great restlessness and uneasiness. R.—Hydrarg. chlor. mitis gr. j., Pulv. antimonialis gr. ij, Morphiæ sulph. gr. $\frac{1}{2}$. To be continued at intervals during the night.

"17th, (7 A. M.)—Obtained some sleep during the night; skin still warm and rather dry; pulse frequent; thirst less than heretofore; less pain of the head; tongue slightly coated and moist; considerable restlessness. R.—Quiniæ sulph. gr. xv.

"9 A. M.—Forehead, wrists, and lower extremities moist, and chest and whole body of a natural heat; pulse a little less frequent, and no greater thirst or pain of the head. R.—Quiniæ sulph. gr. x.

"1 P. M.—Skin generally moist; no thirst; pulse less frequent; no pain of the head, but slight disturbance and deafness from the quinine. No medicine.

"Retreat.—Has been in a quiet sleep; disturbance of the head, and deafness entirely gone; skin moist. Took some tea and toast, and expressed himself as feeling much better.

"Tattoo. (9 P. M.)—Same. R. Hydr. chlor. mitis gr. j., Pulv. antim. gr. ij, and Morphiæ sulph. gr. $\frac{1}{2}$, a Seidlitz powder at 2 A. M., and 10 grs. of quinine at reveille.

"18th, (8 A. M.)—Has had a good night; pulse quick, not frequent; no pain of the head; no thirst; skin natural. R.—Quiniæ sulph. gr. x.

"Retreat. Has passed a comfortable day; head slightly affected by the quinine; skin moist and cool; pulse slow and soft. Is decidedly convalescent. Ordered 5 grs. of quinine at reveille to-morrow, to be repeated at 9 A. M. Continued to convalesce from this date."

"CASE V.—I will here give the notes of my own case. I had been on duty at Fort King since the breaking out of the epidemic in the month of April. In May and June I experienced two or three attacks of intermittent, and in July had a rather severe remittent fever, though of short duration. For some time before the 4th of August I had suffered on every second day with pains of the back, hips, and limbs, darting pains in various parts of the body, sometimes with headache, and always *malaise*, on the alternate days feeling as well as usual. On the 4th of August I was quite indisposed and took 10 grs. of calomel in the evening.

"August 5th. As this was the *well* day I did not consider it necessary to take much medicine, as the calomel had operated; still, before 1 P. M. I took three or four doses of quinine, 2 grs. each, which produced considerable disturbance of the head. Towards evening a nervous headache, particularly severe over the left orbit, became very annoying, which continued until retiring for the night—about 10 P. M. No medicine was taken. I passed a most uncomfortable night, suffering with a severe pain over the whole head, but most severe in the frontal region, with great heat of the forehead; inclination to profound sleep, which was partially disturbed by the intense headache, and aching of the limbs; great heat and dryness of the palms of the hands and soles of the feet; the pulse was full and frequent, and there was slight thirst.

"6th. At reveille (5 A. M.), the pain of the head, and intense heat of the forehead, hands and feet had somewhat abated, (though all continued in a less degree,) nor was the pulse quite so full and frequent as in the night. Regarding

this as being, perhaps, a slight tendency to remissions, and fearing that, as the day advanced, the fever would be exasperated, I swallowed, at $5\frac{1}{2}$ A. M., after considerable hesitation, 15 grains of quinine in solution, with $\frac{3}{4}$ ij. inf. of capsicum. This, in about half an hour, produced a slight perspiration on the forehead, and sensibly relieved the pain of the head. At 7 A. M. I took a bowl of hot coffee, which brought out a free and general perspiration. At 8 A. M., 5 grs. of quinine in solution, with $\frac{3}{4}$ j. inf. of capsicum, were taken and nothing more during the day. The skin continued free; the headache abated entirely; the pulse became slow and soft; and the day was passed comfortably in every respect;—so much so that I was enabled to take the foregoing notes of the case during the afternoon.

“*Tattoo.* Still feel well; some appetite. No medicine.

“7th. Perfectly well with the exception of some debility. Appetite improving. Took 5 grs. of quinine with capsicum three times to-day to prevent relapse.

“*Remarks.*—Had other remedies been given, or any other plan of treatment been adopted; had I placed my reliance on diaphoretics, alteratives, or even upon small doses of quinine on the morning of the 6th; a sick day, and a confirmed remittent fever, would have undoubtedly followed. The combination of quinine and capsicum in a decided dose produced such an immediate impression upon the nervous system, through the stomach, as to equalize the circulation, and cut short the disease.”

Shortly after the attack of sickness described above, Dr. Porter was relieved from duty at Fort King, very much broken down in health, as indeed were all who had remained at that station during the summer, and was ordered to the U. S. Barracks at St. Augustine, where he encountered the yellow fever which prevailed to a fatal extent amongst the troops at that post in the months of October and November of the same year.

Dr. Porter describes the congestive fever, of which disease he met with numerous cases in the course of his Florida service, at considerable length. It was in this disease that the powers of the large doses of quinine were exhibited in the most striking manner. This department of the subject, together with the effects of quinine in yellow fever will, however, be necessarily deferred for the present.

SURGEON-GENERAL'S OFFICE, *Washington, D. C.*, June, 1845.

ART. V.—*Practical Observations on the Radical Treatment of Varicocele.*

By JOHN WATSON, M. D., Surgeon to the New York Hospital.

In the few remarks which I have to offer on the radical treatment of varicocele, I shall confine myself, for the most part, to the operation first suggested by the late Sir Astley Cooper. I have already alluded to this

subject in a previous publication.* But, as the procedure to which I refer, cannot, as yet, be said to have been generally adopted by the profession, or even to have received that amount of consideration which it appears to deserve, I deem no apology necessary for alluding to it again.

It is perhaps proper to premise, that, in the great majority of cases, varicocele gives rise to so little inconvenience, that any attempt at a radical cure by a dangerous or severe operation, is entirely out of the question. Operative measures are scarcely ever called for in persons who are not obliged to lead an active life. Even amongst labouring men the number of cases justifying surgical interference, is by no means so great as the repeated operations of some surgeons would lead us to infer. In short, those who, within a few years past, have furnished accounts of their operations on scores and hundreds of cases of varicocele, have either entirely mistaken the true end of operative surgery, or have been placed under circumstances precluding their experience from all contrast or comparison with that of other surgeons.

Still, cases do occur in which we are called upon to attempt the radical cure of this disease. In all such the operation of Sir Astley Cooper, if I may speak from my own observation of its effects, should be employed to the exclusion of every other method hitherto proposed. When properly performed it is sufficiently efficacious; it subjects the patient to none of the serious consequences that too often attend every mode of operating that is addressed directly to the spermatic veins; it is less objectionable than the operation for ligaturing the spermatic artery; it gives rise to less suffering, and is more efficacious than Breschet's mode of indirect compression; it does not interfere with the functions of the testicle, which are necessarily destroyed by every other mode of operating;—and, if performed sufficiently early, before the disease has led to atrophy of the testicle, it may be the means of actually preserving the functions of this organ.

It consists essentially in diminishing the size of the scrotum by the removal of a portion of integument; and in forcing the tissues to consolidate over the spermatic cord: thus, permanently elevating and supporting the testicle, and at the same time, compressing the varicose mass in such a way as effectually to diminish, if not actually to obliterate it.

Sir Astley Cooper's first idea, in suggesting the operation, appears to have been simply to modify the shape and size of the scrotum so as to enable the patient to dispense with the use of a suspensory bandage. The operation has effected more than this. Yet this imperfect object has led both Sir Astley and some of those who have followed him, to remove a smaller extent of integument than is in most cases requisite to effect a permanent cure, and to arrange the line of cicatrization in a course by no

* N. Y. Journal of Med. and Surg., Oct. 1840. See also Curling on the Testis, p. 484; and this Journal for August, 1838, p. 492.

means the best adapted for exercising permanent pressure along the course of the varicose vessels.

His mode of performing the operation, as given in his own words, is as follows:—"The patient being placed in the recumbent posture, the relaxed scrotum is drawn between the fingers, the testis is to be raised to the external ring by an assistant, and then the portion of the scrotum is removed by the knife or knife-scissors; but I prefer the former. Any artery of the scrotum which bleeds is to be tied, and a suture is then to be made to bring the edges of the diminished scrotum together. The patient should be kept for a few hours in the recumbent posture, to prevent any tendency to bleeding, and then a suspensory bag is to be applied, to press the testis upwards and to glue the scrotum to the surface.

"The only difficulty, in the operation of removing the scrotum by excision, is in ascertaining the proper quantity to be removed; but it adds but little to the pain if a second portion be taken away, if the first does not make sufficient pressure on the spermatic cord. It is of no use to remove a small portion of the scrotum, for from doing this I have failed. When the wound has healed, the varicocele is lessened, but not always entirely removed; but the pain and distressing sensations cease if sufficient of the scrotum be removed.

"In making the suture in the scrotum, its lower part is to be brought up towards the abdominal ring, to raise and support the testis, as does the suspensory sling when it is worn."*

The mode of operation which I have employed is in some respects different from the foregoing. The course of the incision, instead of being transverse at the bottom of the scrotum, is made in an oblique direction with its upper angle over the situation of the external abdominal ring on the affected side, and its lower angle somewhat beyond the *raphé* near the bottom of the scrotum on the opposite side. The testis is not to be forced upwards against the abdominal ring, but to be drawn sidewise. The portion of integument to be removed, before commencing the incision, is to be drawn out between the blades of a long and slender pair of curved forceps, the convexity of which should face the line of incision. The whole mass thus secured is to be removed by a single sweep of the bistoury. The incision thus made removes only the integument. The diseased cord with its envelopes, and both testicles with their serous investments, are at once exposed. The retraction of the remaining portion of the scrotum is so great that, at first, the patient appears to have none of it remaining.

The incision usually involves the external pudic artery, and sometimes a few smaller vessels, which require to be secured. The edges of the wound are to be drawn together—not transversely as recommended by Cooper—but in such a way as to allow the line of suture to follow the

* Guy's Hospital Reports, vol. 3, p. 9; also this Journal for Aug., 1838, p. 493.

natural course of the cord, and so round below the testicle towards the opposite side. This mode of procedure requires a greater number of stitches than Cooper advises. And in order to cover the testicles and to bring the edges of the wound into exact coaptation, there is at first considerable stretching of integuments necessary. But the integuments in every direction around the scrotum are so yielding, that there is no difficulty in obtaining sufficient covering for the testicles, even after removing nearly the whole scrotum. This fact I have seen verified in repeated instances of sloughing of the scrotum from infiltration of urine, as well as from the erosive action of the fluids used for injecting the cavity of the tunica vaginalis in the treatment of hydrocele. Finally, after the edges of the wound have been brought into coaptation, instead of applying a suspensory band, I have the parts well supported with strips of adhesive plaster.

In one instance in which this mode of proceeding was followed by one of my colleagues, after drawing out the integuments between the blades of the forceps I advised him to insert a few suture-threads below the forceps, so as to prevent the retraction of integuments after the incision. But this procedure was not found to expedite the operation. It was afterwards necessary to remove these stitches in order to secure the vessels that had been divided.

Mr. Key,* in following Sir A. Cooper, lays much stress on the importance of effecting union by the adhesive process, in order to secure the most favourable results of the operation. Speaking of a case of his own, in which he failed to effect this, he remarks : "The support which the veins would have received, if the wound had healed by adhesion, would have been more effectual; and I should in another case take every precaution to ensure the adhesive process."

Now, of the five instances of this operation that have fallen under my own observation, complete union by the first intention was not effected in a single one ; and I am not aware that the result of the operation was any the less advantageous on that account. Indeed, the parts are more effectually consolidated by the process of granulation and cicatrization than by that of adhesion. The final union is quite as firm. The only disadvantage of the adhesive process is in the question of time. A certain amount of fibrinous deposit, in the cellular tissue, both external to the sheath of the spermatic cord and within it, appears to be necessary for effectually obliterating the varicose swelling. And this is surely more apt to be effected where the wound becomes inflamed and subsequently heals by granulation and cicatrization, than where it heals at once by adhesion.

The following case, the last upon which I have operated, and perhaps the most successful of any that I have met with, will show sufficiently well that union by adhesion is far from being essential to the success of the operation.

* Guy's Hospital Reports, vol. 3, p. 12.

John Nichols, a German seaman, aged 22, was admitted into the New York Hospital, Feb. 7th, 1845, with slight stricture of the urethra, and with a varicose swelling on the left spermatic cord of several years' duration. The varicocele had been a source of much annoyance to him. The testicle was somewhat soft, and the swelling above and behind it, of an irregular shape and as large at least as a hen's egg, was composed of a vast congeries of vessels that were disposed to become still more distended by sudden exertion, as in lifting, and straining, or in pursuing his usual employment. The swelling was at times attended with pain in the loins and a dragging sensation along the cord; and it interfered so much with his occupation as to render him anxious to submit to an operation for relief.

On the 20th of February the whole of the free integument of the scrotum that could be embraced, without much stretching, between the blades of a very long and slender pair of forceps, made to pass from over the affected cord, obliquely downwards to the lower part of the scrotum on the opposite side,—was drawn outwards, and with one sweep of the bistoury effectually removed. The edges of the wound thus made, gaped so much as completely to expose both testicles, covered only by the tunica vaginalis. The external pudic artery, near the upper angle of the wound, had been divided; and it was the only vessel that required a ligature. Five or six interrupted sutures were necessary for bringing the edges of the wound into neat coaptation along the course of the cord, and so on below the testes. These sutures were further supported by strips of adhesive plaster.

The patient had little or no suffering from the wound. For several days he was confined to bed, and the parts were kept covered with water dressings. In consequence of the tension of the integuments, several of the stitches ulcerated, and in a few days after the operation, the wound began to gape considerably in its middle. The parts were subsequently approximated with adhesive strips, and cicatrization progressed favourably. Before the end of a month the wound had healed, and the varicocele had entirely disappeared. The patient remained in the hospital, under treatment for his stricture, up to the 6th of May, walking about most of the time, and occasionally exerting himself without the least disposition to a recurrence of the varicocele.

The only unpleasant accident that I have known to follow this mode of treatment, is one not more essentially connected with this than with any other operation, viz., the supervention of erysipelas. This occurred in my first case, already published; and although it prevented union by the first intention, I am not aware that it in any way prevented the patient from finally experiencing all the advantages that were to be expected from the operation.

Complications.—The mode of treatment above described is probably applicable to every case in which operative measures are at all advisable. But there is occasionally much judgment necessary to determine whether severe cases of what might be mistaken for simple varicocele, should or

should not be subjected to operation. Those who have written expressly on this disease, have hitherto said little or nothing of its complications. And the surgeon, unaware of these, may, from incautious interference by any mode of operating, do actually more harm than good. This remark is worthy of special consideration. Its truth and importance, I think, are sufficiently shown by the two following cases.

CASE I.—Irritable testis following parotitis, and complicated with varicocele, treated by excision of part of the scrotum, without benefit.—M. J., a robust middle-aged man, a pilot, applied to me for advice on the 24th of March, 1843, stating that he had, some months before, submitted to an operation for the cure of what was considered a varicocele, with more injury than benefit.

About twelve years before I saw him, he had had an attack of mumps, which, in subsiding, affected his left testicle by metastasis. An irritable state of this organ, which was thus induced, has continued to trouble him ever since. In July, 1842, he consulted a surgeon of some repute, who finding the left spermatic veins somewhat varicose, advised the patient to submit to the operation which I have above described. About half the integument of the scrotum was removed by a single incision. The wound was kept from gaping by the insertion of needles and ligatures, prior to the removal of the integument. The operation was soon followed by infiltration of the cellular tissue with a vast amount of blood. For the removal of this, it was found necessary to undo the dressings and open the wound anew. In due time the incision healed; but without any good effects upon the neuralgic condition of the testicle. From the date of the operation, until I saw him, he had never been free from pain. This he compared to the tooth-ache. It ascends from the testis, in the course of the cord, up to his loins. Prior to the operation he had suffered only from the left testicle; but, since the cicatrization of the wound, he has also had occasional and severe pain in the right organ. On examination I did not find the veins of either cord varicose; but in the upper and anterior part of the epididymus of the left testis, there was a small indurated spot from which all his pain appeared to diverge. He could not bear the weight of the finger on the spot. He had at different times been under various kinds of treatment, without relief. His sufferings had obliged him to relinquish his occupation. I gave him no encouragement in the way of cure by any means short of extirpation of the testicle. But for this he was not prepared.

CASE II.—I was invited, September 9th, 1840, to assist in an operation for the cure of varicocele on a medical gentleman, about thirty-six years of age, of highly nervous and irritable temperament. The operation was performed as above described; stitches being introduced prior to the removal of the integument. The wound soon healed; but the patient's sufferings were in no respect alleviated. On further inquiry I ascertained from him, that for several years he had suffered severe darting pains in the left testicle; with a dragging sensation in the loins, and along the left spermatic cord; the veins of which were somewhat varicose. The neuralgic pains, at first confined to the left testicle, at length extended to the right. But on this side they were only occasionally felt, and never so severely as at their primitive seat. He had also had some symptoms of gravel, and had several times voided small calculi. He continued to suffer very severely

for years subsequent to the operation; he finally lost his life by taking a large dose of strychnine in mistake for a dose of morphine.

Mr. Curling,* in speaking of the pain of varicocele, observes, that in some cases it is dull and heavy, and that in others it assumes a neuralgic character so excessive and intolerable that patients have gladly submitted to castration for relief. He cites instances in which castration has been performed with this view, by Gooch, Sir B. Brodie, Mr. Key, and others.

Without stopping to inquire whether the varicocele, in these instances, was the primary affection, or the mere result of a pre-existing neuralgia, I am sufficiently convinced, that, in the two cases above stated, the varicose condition of the spermatic veins was a matter of secondary moment; occurring as a consecutive affection, in the progress of a more serious disorder, in the same way that we see the veins in other parts of the body to which there has been, for any length of time, an undue afflux of blood, become dilated, tortuous and nodulated, and sometimes remain so after the primary affection has subsided. Thus, I have known the veins of the leg to become varicose after a severe injury, near the knee joint, and remain permanently dilated for some distance around the seat of injury for years after the parts had in other respects assumed their healthy condition. I have seen the integuments of the abdomen, traversed in all directions, with superficial varices, the result of an osteo-sarcoma growing from within the pelvis and pressing upwards against the abdominal parietes. The same condition of these vessels is every day observed in the neighbourhood of carcinomatous growths, and around large tumours of every sort, whether benign or malignant.

The practical result of the whole matter, then, is, that if varicocele is found to be complicated with excessive neuralgia, the surgeon, before proceeding to any mode of operating, should be well convinced that the varicose condition of the spermatic cord preceded the occurrence of the neuralgic symptoms, and that these latter are attributable to no other complicating affection.

Neuralgia, however, is not the only complication I have met with. In two cases which I have recently had under treatment, I have found extensive varicocele complicated with serous effusions, partly into the cavity of the tunica vaginalis, and partly sacculated above this along the course of the spermatic cord. In both of these instances the testicle was, at the same time, much engorged, and at least twice as large as natural. The attempt to operate for the radical cure of varicocele in such cases, is, of course, entirely out of the question; at least until after the cure of the hydrocele and engorgement of the testicle. In these two instances the complicating affections were evidently consecutive to the disease of the spermatic veins.

NEW YORK, August 8th, 1845.

* On the Testis.

ART. VI.—*Case of Extra-Peritoneal Dropsy.* By SAMUEL DUFFIELD SCOTT, M. D., and FRANCIS C. REAMER, M. D., of Harrisonville, Bedford Co., Penn. [Communicated by Prof. W. E. Horner, M. D.]

[DR. ISAAC HAYS—Dear Sir.—The following case having been submitted to me by Dr. Samuel Duffield Scott, of Harrisonville, Bedford Co., Penn., an intelligent graduate of the University of Pennsylvania, it appeared so worthy of publicity that I suggested to him the propriety of its appearing in your journal. His consent having been obtained, I now address it to you, along with some authenticating documents.

An allusion to extra-peritoneal dropsy, or one situated on the outside of the peritoneum, owing to the comparative infrequency of the disease, has almost disappeared from systems of medicine; it may, therefore, be well enough to recall attention to it. It will not be irrelevant to remark that Lieutaud, in his celebrated work, the *Historia Anatomico-Medica*, Paris, 1767, vol. i, p. 418, et sequent., introduces several cases of this kind where there were enormous collections of water, either between the peritoneum and abdominal muscles, or in cysts whose cavities were independent of that of the peritoneum. In one case of cyst, 140 pounds of water, somewhat bloody, (*liquor subcruentus*) were found. (See Obs., 1726.)

The following will probably bear transcribing from the above work. Obs., 1747. *Fœmina primis morbi mensibus pro grava habitæ, ventrem per triginta annos, enormem et horrendum gestabat: tandem obiit.*

Cadaver exenteratum exhibebat inter peritoneum et musculos abdominales stupendam aquæ copiam, vel ad ducentas libras et amplius. Ex Actis Londoninibus.

This case exceeds that of Dr. Scott by forty-four pints.

Very respectfully, W. E. HORNER.]

CASE.—Mrs. Sophia Speelman, aged 20 years, from her childhood until the fourteenth year of her age, had been a healthy active girl. Her menses at this period were but lately established, and by exposing herself to inclement weather, she suffered a suppression of that function which never afterwards regained a healthy condition, the evacuation at some times being profuse and at others scanty and imperfect. About two months from the date of this menstrual derangement, her abdomen was noticed to be somewhat enlarged, which created in the minds of many rather unfavourable impressions respecting the young girl's virtue, but these opinions in course of time were abandoned, and the girl looked upon as one becoming dropsical. The swelling increased but slowly until after her marriage, which occurred before she had reached her seventeenth year. At the end of two months after marriage, it was perceived that she increased more rapidly than she had done before, but enjoyed tolerably good health, and continued to

discharge her household duties for one year, when it was found necessary to relieve her by tapping. This was done by a neighbouring physician in the early part of May, 1842. There were obtained from her at this time seventeen gallons of a serous fluid. Subsequently to this, and before I had an opportunity of witnessing the case, she was tapped twice, once in August, 1843, about nineteen months having intervened since the first operation; and again in February, 1844. At the first of these latter operations, there were abstracted nineteen and a half gallons, and at the second seventeen gallons of serum, resembling that which had been obtained at the first operation.

I saw and examined the case, for the first time, on the 3d of May, 1844, at which time she was about to undergo the fourth operation. Since the last tapping until within a few days of the time at which I saw her, she had been able to move through the house with tolerable ease, but could not lay down at night, having to be supported in a sitting posture while she slept. She measured at this time around the most projecting part of the abdomen, six feet and three inches.

We obtained from her at this operation, fifteen gallons of serum, which was a smaller quantity than might have been obtained had it not been that there existed some obstacle to the free discharge of the fluid, which protracted the operation and exhausted the patient to such a degree that it was thought unsafe to allow the canula to remain until all the fluid would have been evacuated. Upon examining the abdomen after the operation, a very large tumour was found to exist in the right side, occupying the hypochondriac and lumbar regions, and extending as far forward as the epigastric. This tumour was regarded by all who examined it, as the liver much enlarged and indurated. The only pain she ever complained of existed in this tumour. Extending to the left and occupying the hypogastric, pubic and right iliac regions, was another large tumour, apparently attached to the inferior portion of the one just described; and deeply seated in the hypochondriac and lumbar regions of the left side, there could be felt a third tumour, which at that time appeared to be about as large as a man's head. This was pronounced by all to be the spleen greatly enlarged. The fluid was supposed to occupy the cavity of the peritoneum, and the cause of its accumulation some obstruction in the portal circulation, which obstruction it was thought existed in the liver.

Now how far this diagnosis will be found to correspond with the actual condition, as revealed by a post-mortem examination, you will learn in the description of that examination below.

On the 1st of July I tapped her the fifth time, being less than two months since the last operation, and abstracted seventeen and a half gallons of a yellowish-green serum. At this and all subsequent operations the puncture was made in the left linea semilunaris, where there was found no obstruction, and the fluid discharged in forty-three minutes. She was

consequently much less exhausted than at the former operation, which lasted three hours.

September 2d.—Performed the sixth operation, and obtained sixteen gallons of a fluid resembling the former.

October 15th.—Being six weeks since the last operation, obtained sixteen gallons by another tapping.

November 26th.—Abstracted sixteen gallons.

January 8th, 1845.—Operated the ninth time and obtained sixteen gallons.

February 17th.—Abstracted sixteen gallons.

March 22d.—Fifteen gallons.

April 23d.—One month since last operation, obtained sixteen gallons. At this and the subsequent operations I was assisted by Dr. F. C. Reamer.

May 25th.—We abstracted fifteen gallons. She appeared to sink so fast at this operation, that we thought it advisable to remove the canula before all the fluid had been evacuated. Her strength declined rapidly after this, until the 4th of June, when she died. A few hours after her death we removed thirteen gallons of serum. Allowing three gallons to have remained within her at the time the canula was removed, on the 25th of May, the accumulation would be at the rate of one gallon per day. She was tapped fourteen times (including the one after death) in the course of three years, and averaging at each operation sixteen gallons of serum; the aggregate amount being 225 gallons.

Post-mortem examination.—After removing the fluid, as I have stated, Dr. Reamer and myself proceeded to make an examination of the body, and found the following condition. By making an incision from the ensiform cartilage to the pubes and crossing it at the umbilicus, with another extending from side to side, we were enabled to lay open a very large cavity, which we were very much surprised to find was not that of the peritoneum, as we had expected; for it was now evident that we had not yet penetrated that membrane. Here there was an anomaly truly strange and interesting. Surely there is not on record a case in which the position of the cellular structure, between the muscular and peritoneal coats of the abdomen, has been known to be the reservoir of so great an amount of liquid at one time. You will be able to form an idea of the extent of this cavity when you remember that there were nineteen and a half gallons of serum abstracted from it at the second operation. Extending our examination farther, we dissected from the posterior part of the left hypochondriac and lumbar regions, a large cyst containing at least two gallons of perfectly transparent serum. This cyst was situated behind the peritoneum and partly covered by it. This tumour was supposed to be, while the patient was living, the spleen as stated before. From the hypochondriac and lumbar regions of the right side, we took a large tumour that would have weighed from 12 to 15 pounds. This tumour differed greatly from the one

taken from the left side, being much more firm and solid. Upon making an incision into this mass, we found enclosed within its walls of fibrous matter, a great number of small cysts filled with substances very different in appearance. From some of the cells there oozed a fluid much resembling cream in colour and consistence, and in others this fluid appeared to be coagulated, forming a cheesy matter, and in the largest division of cells was contained a transparent serum, like that obtained from the left side. This mass externally adhered closely to the lateral parietes of the abdomen, and internally to the peritoneum. It was this tumour that had been considered the liver much enlarged and indurated. There was yet another large tumour occupying the right iliac, the hypogastric and pubic regions, which was removed and would have weighed about eight pounds. Its structure and contents were similar to the one last described. It adhered with almost cartilaginous firmness to the anterior parietes of the abdomen and projected posteriorly into the large cavity first spoken of as the one from which was taken the immense amount of fluid mentioned. Adhering to the walls of this large cavity, in different places, were a number of smaller tumours varying from one to three inches in diameter and having a peduncular attachment.

The straight, oblique and transverse muscles of the abdomen had almost entirely disappeared, and been replaced by a cellular structure, which was very yielding and flaccid. We now made an opening throughout the peritoneum which was very much thickened and indurated. Here we found everything directly contrary to the expectations of all who had examined the case. The liver was healthy and natural in size and appearance. The spleen slightly enlarged—the kidneys apparently healthy.

We were prevented by the impatience of the friends of the deceased, from examining the uterus and ovaries as minutely as we desired, but so far as our observations extended they appeared natural. There were objections made to the examination of the chest, and the condition of the heart was not, therefore, exactly known.

SAMUEL DUFFIELD SCOTT,
FRANCIS C. REAMER.

Extract of a letter from Samuel E. Duffield, M. D.

"My first professional acquaintance with the case of Mrs. Speelman was in September, 1843, at which time I was called in consultation respecting her. On visiting the patient we found the abdomen distended to such a degree, that she measured six feet five and one half inches in circumference; the lower extremities were also enormously distended. She suffered greatly from dyspnoea, produced by the pressure of the fluid upon the pulmonary apparatus. In other respects she appeared comparatively well; her appetite and organs of assimilation were good; pulse regular and moderately full; tongue clear and moist, and her skin the natural

temperature. On account of her extreme difficulty of respiration, she was obliged to remain in the sitting posture for some weeks previous to our visit.

"The operation of paracentesis abdominis was concluded on, and accordingly performed. After the trocar had been withdrawn, about two quarts of dark, thick fluid escaped: the appearance of the discharge then changed to a slightly yellow colour, inodorous, and moderately viscid.

"The amount of fluid obtained at the operation, was about 18 gallons, as nearly as could be ascertained, although a considerable quantity was lost in conveying it from the vessel that received it from the canula to a large tub, out of which it was afterwards measured. After the above amount was evacuated, we were compelled, from the exhaustion of the patient, to close the orifice. Notwithstanding, her abdomen still remained considerably distended and the fluid discharged itself freely. During the night, however, the adhesive plaster over the wound became loose, and, as was supposed, about one and a half gallons escaped. The whole quantity therefore discharged at this single operation, amounted to about 19 gallons and a half.

"The patient in a few days was able to walk about with apparently little inconvenience, until a short time previous to the next operation, which was performed about four months after. I was not present at this time, but was informed by the physician who operated, that he had removed about 17 gallons of fluid, similar in appearance to that which was obtained at the previous operation. In the month of May following, I removed from her, assisted by Dr. S. D. Scott, about 16 gallons. From this time until her death the patient was under the care of Dr. S. D. Scott, who operated upon her several times, removing, as he informed me, at each operation about 16 gallons. I assisted him on the 9th of January, 1845, when we obtained a little more than 16 gallons. A detailed history of the case, together with the post-mortem examination, has been fully reported and may be relied on as correct.

SAMUEL E. DUFFIELD, M. D."

McConnellsburg, Bedford Co., Penn., August 1st, 1845.

ART. VII.—*Surgical Cases.* By GEO. C. BLACKMAN, M. D., Newburg, Orange county, New York.

CASE I.—*Genoplasty.*—About the 1st of June, 1844, I was requested to see a daughter of Mr. Purdy, of Sullivan county, who had lost a large portion of her cheek during convalescence from an attack of malignant typhoid fever, late in the fall of 1843. This fever had prevailed for some months in the western part of Orange, and the south-east portion of Sullivan county,

and was of great fatality, destroying no less than eight persons in one family. Five members of Mr. Purdy's family suffered from this terrible disease, but one only died. This was the sister of my patient, who was about 18 years of age. Extensive sloughing took place in the right glutei region, causing the destruction of nearly all those muscles, whilst the soft parts covering the lumbar region on the back were affected in a similar manner. This was not the consequence of pressure, and no particular cause could be assigned. However, when once commenced, its progress could not be arrested, and the patient soon died. I had no opportunity of examining the bodies of those who died, but my friend, Dr. Newman, of Goshen, informed me that he found extensive ulcerations of Peyer's and Brunner's glands.

The following extract from a letter received from Dr. Botsford, who attended Mr. P's family, explains the manner in which this sloughing occurred in the subject of this report.

"I have a patient which I wish you to benefit by your surgical skill, if after a statement of the case, you should consider it a proper one for a successful operation. The deformity consists in a loss of a considerable portion of the left cheek by gangrene. The patient is a girl twelve years old. She was attacked with bilious fever some weeks since, typhus supervened, and after a number of days convalescence took place. During her recovery she took cold and suffered from the toothache. The cheek began to swell and became very much indurated. Erysipelatous inflammation set in, which extended to the opposite cheek and to the forehead. During this state of things, a messenger came in haste early one morning, stating that a circular 'black spot' had made its appearance on the cheek opposite the painful tooth. I found the inflammation had terminated in mortification, which extended until a portion of the whole cheek fell out, thus making a

most hideous deformity. *Can it be remedied?* Healthy granulations are now present on the edges of the excavation, and doubtless nature will do something to diminish the diameter of the cavity. The gangrene destroyed the cheek back of the termination of the parotid duct, and, at present, the cheek immediately forward of the ear is distended by the secretion from the parotid gland. I intend making a new opening on the inside of the cheek, and keeping up

Fig. 1.

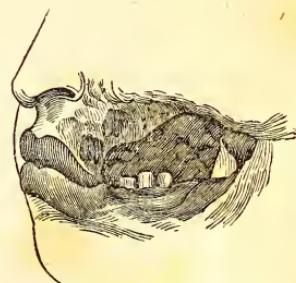


the discharge through it by means of a tent, until the passage becomes permanent."

Dr. B. succeeded in overcoming this difficulty, and the patient's health having become established, she was brought to Newburg in the latter part of May, for the purpose of having the deformity removed. *Fig. 1* affords an accurate view of the face a few days previous to the operation. The diameter of the cavity, as Dr. B. predicted, had become slightly diminished, by the granulating process. There was complete immobility of the lower jaw. A portion of the superior maxillary bone had exfoliated, leaving the cavity, *a, fig. 1*. Several of the teeth had dropped out, whilst one protruded through a mass of granulations near the angle of the mouth. This was extracted, when I proceeded in the next place to overcome the ankylosis of the lower jaw. I was enabled to accomplish this object by the apparatus represented in the Amer. Journ. of Med. Sciences, No. 51, and employed by Dr. Mütter for a similar purpose. It was used gradually for about a week, when I proceeded to the formation of a new angle of the mouth, a matter of considerable difficulty, as a part of the outer substance of the upper lip was destroyed, whilst the remaining portion was indurated and unyielding. After removing the fungous granulations, I cut through the substance of the lip, first in a perpendicular direction, then the incision was carried transversely on a level with and to the root of the nose, whilst another, but shorter, made perpendicularly, allowed the lip to be turned downwards. The margins of both lips were then removed and united by several sutures. These were removed on the third day, when union was found to be perfect. *See Fig. 2.*

In the course of three or four days, I proceeded to the main operation, viz., the filling up of the cavity on the cheek. Finding that the soft parts surrounding this cavity were quite rigid and deprived of their elasticity in consequence of the previous inflammation, I resolved on borrowing the flap from a distant part. The outer and upper portion of the arm was selected for this purpose. After making out a flap about one-third larger than the part to be supplied, it was dissected and fastened to the cheek by the twisted suture applied at various points around the whole border of the excavation which was previously made bare. The arm was bound to the head so as to render it fixed and immovable. This position, though irksome to the patient, and though the weather was excessively hot, was borne with much fortitude until the fifth day, when fearing that she might tear the parts asunder, I separated the flap from the arm. For twenty-four hours it looked dark and

Fig 2.



unpromising, but on the second day its colour became more natural, whilst its temperature was increased. On the third day my apprehensions were removed in relation to the greater portion of the flap, but a small part attached to the extreme angle of the cavity gave way, leaving a space half an inch in width and three-quarters in length uncovered. The margins of this cavity were afterwards approximated and united, by making an incision parallel to and about half an inch above and below its free borders. Considerable difficulty was experienced in uniting this part to the external perpendicular margin of the flap. This, however, was finally accomplished, but not without breaking loose a small portion of the upper part of the transplanted skin.

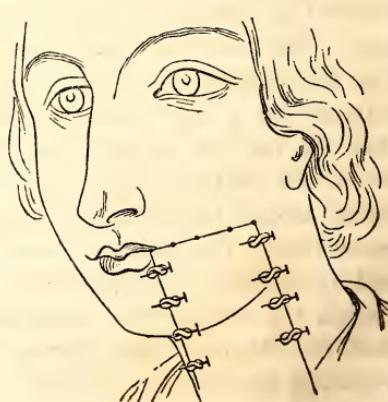
Owing to the pecuniary and other troubles of Mr. Purdy's family, she was removed home, since which I have not seen her. Dr. Botsford not long ago informed me that the small opening above mentioned (about four lines in diameter) has not become diminished, although a little more than a year has elapsed since the operation, but he also stated that the rest of the cheek with the flap had become quite fleshy, and that the result has surpassed his most sanguine expectations.

Remarks.—When I performed this operation I had not seen the splendid work of M. Serre, of Montpellier, "Sur l'art de restaurer les Diffémités de la Face selon la méthode par Déplacement ou Méthode Française," a work which must undoubtedly take precedence over all others, on account of the simplicity and the almost mathematical precision to which he has brought this branch of surgery. As the circulation of this work in this country must, as yet, be exceedingly limited, a brief outline of the process adopted in cases similar to my own, by M. Serre, may not be unacceptable to many who are denied access to its pages. This method "par déplacement," or Celsian method, modified and improved by Chopart, M. Roux, Lisfranc, and last of all by M. Serre, consists in the formation of the flap

Fig. 3.



Fig. 4.



from the immediate vicinity of the part to be supplied, which is to be drawn without torsion to the place it is henceforth to occupy. The deformity arising from the cicatrization of the parts must be much less than by any other process. The accompanying outlines from the atlas of M. Serre's work, will do more to illustrate this method than pages of verbal description. See *Figs. 3 and 4.*

CASE II.—*Fungous Tumour of the Neck. Ligature of the Primitive Carotid.*—J. B., æt. 30, June 17th, 1843, consulted me respecting a large tumour which he first observed some two years before on the right side of his neck just below the ear. At first, it was unattended with pain, and gave him no trouble. It continued, however, steadily to enlarge and became at length exceedingly painful, especially when he was fatigued from hard labour. For several months he had been obliged to abandon his occupation (farming), on account of the inconvenience which it gave him from its size, &c. He stated that he had been under the care of several physicians, and had tried most of the preparations of iodine, with a variety of other medicines, without the least benefit. In the early part of April, the tumour had been lanced by his family physician with the expectation of finding "matter." Nothing but clear blood followed this proceeding, and he thought that he lost at least a pint before it could be checked. *Fig. 5* represents the appearance of the tumour on the day of the operation. It was from four to five inches in height and at its base the diameter was about six inches. In the centre was a large opening, sufficient to admit two fingers. This extended to the sheath of the carotid artery. From every part of the upper surface there was a profuse discharge of most offensive bloody matter which amounted to a pint a day. For nine weeks this had existed and his strength was nearly exhausted. The tumour was excessively hot, and a throbbing sensation was distinctly perceptible. To think of extirpating this fungous mass was out of the question. I informed him that there was not a well-authenticated case on record which had been cured by the knife, and that under any course of treatment his

Fig. 5.



condition was most unpromising. I told him, however, that there was one course which had succeeded, though rarely under such circumstances, and that was the ligature of the principal artery supplying the tumour with blood. The heat of the weather was intense ; the thermometer ranging for several days in succession at 90° Fahr., his strength was rapidly failing, and it was the opinion of several physicians who saw the patient, that there was no time for delay. Notwithstanding our unfavourable prognosis, Mr. B. was anxious to submit to the operation.

On the 21st of June I placed a ligature around the carotid just below the omo-hyoideus. No difficulty occurred ; neither was there more than a tablespoonful of blood lost during its performance. The wound was lightly dressed, and for a few hours the patient was very comfortable. In the evening, some considerable reaction having taken place, I took from his arm about ten ounces of blood. During the night he became somewhat delirious, and on the next day there was paralysis of the left side. The bowels were constipated, and I was obliged to draw off his urine with a catheter. Ordered half an ounce of castor oil. This, though repeated in the evening, procured no evacuation, which was only effected by the administration of several enemas. For the whole of this day he complained of considerable pain on the right side of his head. Took nourishment well. On the third day, the pain in his head had greatly diminished, and he felt very comfortable. On the fourth, he could slightly move the left hand and foot. No evacuation of urine or of stools, except by the catheter and enemas. On the fifth, he again lost all power over the left side of the body. Passed his urine twice during the day. Continued to take his nourishment well. Complained of feeling very weak. Gave him carb. ammon. rubbed down in muc. gum Arabic. On the sixth, we found him rapidly failing. Some cough, and accumulation of mucus in his throat. Removing the dressings from the wound, found that it had united throughout, except at the point where the ligature was applied. Said that he felt no pain, but acted rather stupid. On the seventh, I was sent for in haste, the messenger stating "that a vein had burst." I soon reached my patient and found the attendant holding a compress over the wound, and pressing with much force. Removing the dressings I discovered that about a tablespoonful of blood had issued from the wound, which greatly alarmed the attendants. I found also, that the adhesions which had taken place in the wound were rapidly giving way. By the application of ice, the oozing of blood immediately ceased. The patient became comatose and died about noon, on the eighth day after the operation. In less than an hour after the operation, the tumour became cold, and the discharge ceased. By the second day, it was obvious that the whole mass would soon slough, and five days after the operation, the physicians who saw the patient, were, with myself, highly pleased with his appearance. After this period, the heat became most oppressive ; the thermometer ranging at 95° Fahr. Our patient suffered

greatly in consequence, and I am satisfied, that it added much to the debility under which he sank exhausted.

Autopsy.—As the body had to be removed to a distance of some 40 miles, I was obliged to make a very hurried examination, and this was confined to the tumour and the parts involved in the operation. The tumour was so rotten that it required to be handled in the most careful manner, to prevent its dropping into pieces. On making an incision through its base, we found it much more diffused in the surrounding parts than could have been expected from the well-defined boundaries it seemed to present externally. It was easily detached from the parotid gland, which presented nothing unusual in its appearance. We observed several distinct cysts containing brain-like matter scattered through its base. Interwoven as it was with the deeper-seated parts of the neck, it would have presented very great difficulties to any attempts for its removal by the knife.

The carotid alone was found included in the ligature. Its connection with its sheath had not been disturbed to the extent of more than one-third of an inch. There was a complete division of the coats of the artery on the side adjoining the trachea, for about a quarter of an inch, and it involved about one-third of its circumference. Above the ligature to the point of bifurcation, the artery was completely closed, whilst the same condition existed below, for about half the distance between the ligature and the origin of the subclavian.

Remarks.—Could this operation have been performed at an earlier period and at a more favourable season of the year, I sincerely believe that even if the patient had not been cured, his life would have been considerably prolonged. Dr. Mott has reported a case similar to my own in the New York Hospital Med. and Surg. Register, for 1820. He says, “in consultation it was agreed, that an operation which would lessen the flow of blood to the fungus, and permit as much of the tumour to be removed as possible, afforded the only possible means of prolonging the existence of the patient or of mitigating his sufferings.” This operation was performed in November, and the patient lived only three months. But he was labouring under pulmonary difficulties previous to its performance, which were aggravated for a week or two in consequence, and Dr. M. gives it as his opinion, “that his death may, with more propriety, be attributed to the pulmonary than the fungous disease.” It is evident that if the patient derived any benefit from the proceedings of Dr. Mott, it could not have been from the removal of the external portion of the tumour, but it must have been owing to “the cutting off of its supply of blood” by the ligature of the carotid.

From the researches of pathologists it would seem reasonable to expect, that tying the principal artery supplying the tumour should be attended with good results. Mr. Walshe observes, that “the general impression derived either from the aspect of the vessels of encephaloid or from the

results of injection, appears to have been that they were essentially arterial. In 1830, Prof. Berard injected with all necessary care, the arteries and veins of the neck of a subject who had died with two non-ulcerated encephaloid tumours in that region. On dividing the masses in different directions, the usual characters of arterial injection were discovered," &c. &c.

M. Magendie assures us that he tied the carotid with the effect of permanently stopping the growth of an enormous scirrho-encephaloid tumour on the side of the head and face, which had twice been reproduced after partial ablation. We have high authority for stating that if the fungous mass cannot be made to slough by the ligature of the main artery supplying the tumour, and the application of ice, &c., the patient must die. Sir Astley Cooper declares that "this disease has a continual disposition to slough, and in this manner, occasionally receives a natural cure, for instances have been known where the entire tumour has sloughed, the wound healed kindly and *the person has been permanently cured.*" Mr. Cline also states that he has seen a complete cure by sloughing. Now what method is more likely to produce this sloughing of the tumour than the ligature of its principal artery, and, if necessary, the constant application of ice?

Having the testimony of such men as Mott, Dupuytren, Magendie, Maunoir, Lucas, M. Jobert, Pattison and Hosack, in favour of this operation, and having witnessed its decided effects in arresting the flow of blood to the tumour in my own patient, I shall feel bound in similar cases, to give it a preference over every other method hitherto suggested in the treatment of this most formidable disease. Cases do occur, as Copland, Maunoir, Lobstein and Velpeau have remarked, in which, as in my patients, the disease has not invaded the digestive or assimilating organs, where the absorption of the morbid matter has not taken place to a great amount, and where the patients still retain their natural colour. In these cases, when some external part only is affected, and when the general health, as in Mr. B., remains unimpaired, but the patient is sinking from the excessive discharge from the tumour, the course which I adopted has certainly some important arguments in its favour.

ART. VIII.—*On the Congestive Fever as observed at Memphis, Tenn.*
By WM. J. TUCK, M. D. [Communicated by Dr. C. W. PENNOCK.]

A RESIDENCE in this city (a central situation in the S. W., and the most important town in Tenn.), for more than three years, has afforded me a good opportunity of witnessing the diseases incident to this latitude, and I have endeavoured, with much care, to determine the most appropriate and suc-

cessful treatment for them. My attention has been more particularly directed to the treatment of the fevers which prevail during the autumnal months, in this region of country, such as intermittent, bilious remittent, and congestive fevers.

The most intelligent physicians here, as well as elsewhere, regard the word *congestive* as indicating no distinct disease, but merely expressive of a *symptom* or *condition* which may be connected with any of the forms of fever. It may be proper here to state that so far as I have seen and am acquainted, we have here very little *continued*, *typhus*, or *typhoid fever*, nearly all the cases being of an intermittent or remittent character, and running their career either to a fatal termination or recovery, very rapidly. Of course, we attribute all of our fevers here to miasmatic origin, as we reside on the banks of the Mississippi, in a new, flat and humid region of country. In the treatment of the fevers of the south, for a few years past, the most eminent physicians have relied upon the use of large doses of quinine as their most prominent and successful remedy. Who was the first to adopt this mode of treatment, so far as I am acquainted, has not been ascertained. The probability is that some reflecting mind was led to adopt it, by reasoning very philosophically, that if the bark and quinine were so successful in the treatment of the congestive or malignant intermittent fevers which occurred in Italy and other miasmatic countries, under the practice of BAILLY, LIND, SENAC and others, they might be equally successful in the treatment of fevers in the south, which, in their symptoms, presented so great a similarity to such as are described by the writers just alluded to, and which yielded so readily to large doses of the bark or quinine. Removing to the south-west in 1840, I had an opportunity of meeting with some distinguished physicians, of large experience, and who for a number of years had employed quinine in large doses in the treatment of bilious remittent fever with the most signal success. In a conversation with Dr. Thomas Fearn, a distinguished physician of Huntsville, Alabama, he informed me that he was the first person, as well as he remembers, who introduced the use of large doses of quinine in the treatment of a very fatal form of fever which prevailed in Huntsville more than 15 years since. He remarked that the disease was producing the most destructive ravages and was fatal in almost every case. No remedies seemed to avail anything, and when a member of a family was seized by the disease, he was already looked upon as dead. The Dr. mentioned that he did not recollect what particular circumstance led him to adopt the quinine, but, while anxiously casting in his mind to ascertain some more successful mode of treatment, he was induced to try large doses of quinine, and the first case in which the treatment was employed, recovered readily; it was used with like success in the second case; the same plan was adopted by other physicians, and from that time, the disease was arrested without any difficulty. My father, Dr. D. G. Tuck, who

practised many years in Halifax County, Va., on the low lands of the waters of the Roanoke, has informed me that he relied chiefly upon the use of bark (before quinine had been invented) in the treatment of the bilious remittent fevers of that region, in opposition to the theories then taught and practised by other physicians, and found it the best febrifuge that could be employed, and has since used the bark and quinine, with marked success, in the treatment of fever, by the employment of large doses.

It certainly must be highly gratifying to every friend of humanity that so useful a discovery has been made, and that this is becoming the established practice in the south among all intelligent physicians, so that where, formerly, death swept over the land with a resistless tide, cutting down thousands in his sad career, we are now able, comparatively, to arrest his destructive march, and almost insure a speedy return to health, wherever a hope to live would formerly have been regarded as folly.

My own experience during the years I have been residing in the southwest, is still further corroborative of the success attending the mode of practice to which I have been alluding. I have been residing in this city between three and four years. During this time my practice, of course, has been limited in comparison with some older physicians; but during the summers and autumns of these years, I think I have attended, each season, from 20 to 30 cases upon an average, and I can state, with certainty, that not one of these has died where the quinine has been used freely. One case occurred which presented all the symptoms of yellow fever, and which I regarded as a sporadic case of that disease, in which I was afraid to employ the quinine, in the early stage, and which terminated fatally; but I now believe if this medicine had been used in the early period of the attack, the patient might have been saved. Very few cases have occurred in which convalescence did not commence in the course of three or four days, sometimes earlier, and in a number of cases, the patient would be attending to his usual avocations in a week from the time of the attack. The most violent of these cases would be called *congestive fevers*, according to the sense in which this term is usually employed. We are here in the habit of giving from 5 to 10 grains of quinine at a dose, sometimes 20, to be taken two or three times a day, according to circumstances. I have generally found 20 grains taken during the day, in from 5 to 10 grain doses, sufficient to break up the paroxysms in all the cases I have attended. I have had, in my own person, several severe attacks of remittent fever since I have been residing here, and have found that 20 grains, taken for two or three days, arrested the disease without any difficulty. We employ blue mass as an excellent adjuvant. When the head is much affected we use blood-letting or cupping, and where there is much wakefulness or nervous irritation, combine a little morphia with the quinine.

As an illustration of the sedative effects which large doses of quinine exert

upon the pulse, permit me to allude to a case or two which occurred in this place last summer. I sat up all night with a young gentleman who was very sick, last summer, whose pulse beat 140 in a minute; I gave him quinine during the night to the amount of about 30 grains, as well as I recollect, and before morning the pulse was reduced to 104 in a minute. Another remarkable case occurred also last summer, in the person of a young lawyer of this city who had a severe attack of bilious remittent fever, and in the course of two weeks had declined so far that doubts were entertained of his recovery. His physician was opposed to the use of quinine—the patient had return of fever every afternoon and was rapidly sinking; a consulting physician was called; ten grains of quinine were recommended every hour until 30 grains should be taken. The patient missed his paroxysms that evening and convalesced from that moment. Instead then of fearing to employ the quinine, when there are febrile excitement, hot skin, frequent pulse, headache, &c., as we are taught by some writers who regard it a stimulant and irritant, we are forced to the conclusion that this medicine, in large doses, acts as a sedative and febrifuge. In farther corroboration of these statements, the following remark is made in Stokes and Bell's practice. The author says, "A large dose acts at once or very soon upon the nervous system; and by diffusing the sedative influence through all its parts, it completely allays irritation and induces general tranquillity of the functions." And the author goes on still farther to show that there is no danger of the irritation so much dreaded, by stating that enormous doses of quinine have been taken by mistake without producing any bad effects.

From the time I was first convinced of the great efficacy of quinine in the cure of fever, I have been led to believe that its curative effects may be explained upon the principle of its primary and direct action upon the nervous system, and its action, indirectly, through this medium, upon the sanguiferous system. Aware that there must always be a healthy balance between the nervous and sanguineous systems, for the existence of good health, and knowing that quinine exerts a specific action upon the nervous system, the inference seemed to me natural that quinine might produce its salutary effects in arresting the progress of fever, by restoring the impaired energy of the nerves, thus control the circulatory system and bring about that harmonious balance which is so essential to health.

None of the arguments or statements which I have advanced are new, but I am convinced that there are many physicians in our country who are treating fever upon wrong principles, and I have thought that these observations, if allowed a place in the *American Journal of the Medical Sciences*, might be the means of effecting some good.

ART. IX.—*Contributions to Legal Medicine.* By ARISTIDE RODRIGUE, M.D.

CASE I.—*Commonwealth vs. Jeremiah Wilson Porter; Indictment for Fornication and Bastardy. January Term, 1844: for Cambria County, Pa.* Defendant plead “not guilty.”

The ground on which the defence rested was “protracted gestation,” the term extending to 317 days, from Sept. 24th to Aug. 7th. The following testimony was produced.

Margaret Shoup, sworn:—I am a single woman; I am 23 years of age. I am the mother of a female child; it was born the 7th of August, 1843; Jeremiah Wilson Porter is its father; the child is living. It was begotten on the night of the 24th of September he had connection with me more than once, not more than twice that night; it was three or four weeks after the connection that I knew I was pregnant. I had connection with no other man after that—I never had connection with any man before that; I was in bad health; my courses stopped about three weeks after the connection; *they appeared again about* five weeks before the child was born—they did not appear before that; lasted two days—there was not the usual quantity; about this time, five weeks before the birth of the child, I was very sick; had pains which continued for a long time; I had the pains frequently after this up to the birth of the child.

Catherine Shoup, sworn:—My sister was sick from the 19th January, 1843, till the birth of her child. Dr. Phytian said she had liver complaint; she quit taking medicine the last of June.

Dr. Rodrigue, affirmed.—Have been in practice since I graduated, 19 years since; have attended several hundred cases of midwifery; in my own practice the longest period was upwards of 10 months, have frequently met with cases of protracted gestation beyond the ninth month; it is considered no uncommon occurrence. I have met with several cases (a few weeks, two weeks). I take the pains spoken of to be an attempt at labour.

Cases of protracted gestation are met with in young women; can't say whether they are more numerous after the first birth. The ordinary period is from 270 to 280 days; the birth of the child will occur in or about nine calendar months.

No testimony was produced by the defendant except to prove his absence shortly after he had connection with the girl, and that he did not return until after the birth of the child. He was counseled not to compromise with the female, as the extended term would clear him.

No evidence was produced to impeach the character or conduct of the female; but, on the contrary, she invariably bore a good reputation, and it

was also proved that under promises of marriage the plaintiff had yielded to the desires of the defendant.

The court charged the jury strongly in favour of the medical testimony concerning protracted gestation, and the jury, after retiring for a short time, brought in a verdict of "guilty" against the defendant.

There was a circumstance which tended strongly to dispose the jury to admit the case of protracted gestation; among their number were two married men, who stated that their wives always went beyond the usual term of nine months, and on one occasion one went beyond ten months.

Among several other cases which have since come to my knowledge, I may mention the following: Elizabeth Marks, a married woman, at the age of about 36 years, went 11 months with one of her children. Her account is, "that she missed her menstrual period in the beginning of November, (had been regular before), quickened* on the 4th of March; took ship to come to America on the 25th of same month; was very sick during the whole passage, which was a very long and boisterous one; and on the Monday before the October court of Cambria county, was delivered of her child, being altogether at least 320 days.

CASE II.—Commonwealth vs. Bernard Flanagan and Patrick Flanagan. In the Court of Oyer and Terminer, Cambria county, Penna. October Term, 1842: Indictment for Murder.

Bernard and Patrick Flanagan were arraigned on the 5th of October, 1842, upon an indictment for the murder of Elizabeth Holder by strangulation or choking, by striking with a tongs, &c., a charge to which they plead "not guilty."

It appeared in evidence that on the night of the 31st July, cries of murder and screams were heard proceeding from the house of Elizabeth Holder, by Mr. Rainey, a neighbour; the cries seemed stifled as one strangled or choked; he, and a boy living with him, went down near to the house, and hearing the voices of men in the house and fearing to go in, proceeded to another neighbour's house, Wm. Wherry, and having procured his assistance, returned; shortly after two men were seen to issue from the house; one had neither coat nor hat on, and the other had a coat but no hat on,—one was taller than the other—one said to the other "down the road;" the accent denoted an Irishman. They were followed a short distance, when they turned into the woods; the night, though dark, was sufficiently clear to distinguish objects.

Upon the return of the neighbours, and entering the house, the body of

* Quickening, apart from other evidence, would not, in my opinion, be positive testimony of a female being four months with child; for I am acquainted with a lady who invariably quickens at two months, going full seven months after with all her children, now five in number.

E. H. was found lying partly on the floor and partly on the upper portion of the door, which had been broken off; she was in her night dress, lying on the left side of her face, with one or both arms crossed under her chest; her hair was in disorder and around her face; a wound upon the head and marks of fingers on the throat and mouth; some of her hair in the joints of a heavy pair of tongs lying near her; signs of evacuations from the body about the room and near her. She was quite dead; the house was in the greatest disorder; the bed was pulled to pieces; the drawers and chests broken open, and their contents lay scattered on the floor.

Pursuit was made the next day, and the prisoners seen at different times and places, making their escape separately from the neighbourhood; they were finally taken, Patrick in Centre county, and Bernard in Clarion. Their hats and coats were found the day after the murder near the house.

The following evidence was adduced on the trial.

On the 26th or 27th July the prisoners left Centre county in obedience to the request of the brothers, to withdraw some property from the county, and to stay away until after the court, as there was a warrant out for them for resisting the sheriff in the execution of his office.

On the afternoon of the 30th they made their appearance in the neighbourhood of the Cottage Tavern in Huntingdon county, a few miles above Hollidaysburg, put their horses to pasture and stayed at the tavern all night, and said they were going to Pittsburg to purchase horses; they were next seen at the summit, nine miles from Ebensburg, Patrick being recognized on the trial by Wm. B. K. Johnston, Patrick telling him there they were returning from Ohio; they were recognized as being next at Munster, a small village three miles from E. H.'s house, between Munster and Ebensburg,* there meeting with a man named Evans and drinking together at a tavern; in company with Evans they proceeded on to Wm. Wherry's Tavern; passing E. H.'s house, which is only a few hundred yards from Wm. Wherry's; there they again drank, and Wm. Wherry, at the trial, identifies them as the persons who were in his house that evening, and the clothes and hats produced in court, he testifies to as being worn by the prisoners on that day. They leave Wherry's, Evans going home and the prisoners taking the direction of Ebensburg, but not going there. That night the murder was committed.

Several witnesses testified to admissions made by the prisoners both before and after their arrest, which strongly implicated them in the murder.

An inquest was held the morning after the murder, and a verdict of murder by person or persons unknown. On the same day a post-mortem examination was made by Dr. A. Rodriguez, assisted by Dr. Wm. Smith. The examination was made by order of two justices of the peace; it was

* Elizabeth Holder resided about one and a half miles east of Ebensburg, Cambria county, on the northern turnpike leading from Harrisburg to Pittsburgh.

neither so perfect nor minute as we could have wished, the epidemic dysentery was prevailing to a great extent and severity in the neighbourhood, and our time was too limited; besides, a mob of women and friends had assembled outside of the house, determined to oppose us in our examination, which was hastily carried on in a small room filled with persons, whom we had introduced to assist us in repelling any attack.

Dr. Rodrigue testifies "on the afternoon of the 1st May, I made a post-mortem examination of the body of Elizabeth Holder. The general appearance of the body was rigidity of all the limbs; no evacuations from the body; (had been washed and laid out); deceased appeared to have been between 50 and 60 years of age, of a robust frame; the fingers were bent towards the palms of the hands; general pallid appearance of the body, except the face, neck and back; the discolouration on the back was produced by settling of the blood; the face was swelled, livid and puffed up—bloated; the jaws were tightly closed, with the tongue slightly between the teeth; the eyes protruded and staring; pupils dilated; eyes a little bloodshot; a great deal of discolouration about the face and neck, livid and dark-coloured; marks of two fingers on the left cheek, and a livid, dark-coloured tumour on the left side of the neck under the ear, produced by blood accumulating in that part, of recent formation; the lips were swollen, of livid dark-colour; blue, as well as the tongue; the inside of the lips and mouth was of the same dark colour; very offensive fetor from the mouth; a little, frothy bloody mucus or saliva from the mouth; the neck was swollen and much discoloured from the blood settling in it; an infiltration of blood in the different parts of the skin exhibited an appearance of bruises and different marks of fingers; marks of finger nails or some sharp, half rounding instrument immediately on the neck, (apple of the neck,) more on the right and some on the other side of the neck; can't tell how many finger marks; a good many slight bruises and marks I attributed to fingers; on laying back the skin I discovered extravasation produced by pressure or contusion; swelled as well as extravasated; found a good deal of extravasation in the cellular membrane; a thin substance connecting the skin to the muscles and connecting muscles, this being a loose substance, whenever there is a rupture of a blood-vessel the blood finds easy access through this; showed the cause of the swelling; minute injection of all the veins and capillary vessels; firmness and resistance of the parts much increased, much more so than are usually found in dead bodies; are occasioned by contusion; much extravasation of blood in the muscles; muscles darker colour than natural; the windpipe red and injected; blood forced into it; all the veins of the neck were so turgid and full that it interfered very much with our dissection from the profuse bleeding; frequently had to tie them up; no particular marks of external violence on the chest; but upon opening the chest the lungs were found to fill the whole cavity; they were excessively gorged with blood, mucus and air. The heart appeared distended, filled up with blood; the veins of the heart most extraordinarily so; did not open the heart; it exhibited great firmness or hardness, as if the cavities of the heart were filled with blood; all the veins of the chest very much distended with blood; the head thickly covered with hair; on laying back the scalp, we discovered three severe bruises, one over the left parietal bone; one behind the right ear, a little above and behind the right ear, and one over the right eye; this last the most severe; two or three less bruises of minor consequence, did not consider material; on removing the skull cap (the

bone), which was rather thin, we found an old adhesion of the dura mater (a parchment-like skin) to the bone. It is the membrane that covers the brain; the vessels of the brain were unusually turgid; very much distended and filled with blood; a small clot of blood found on the right top of the brain, above the contusion not under it; no extravasation, no effusion in any of the ventricles or cavities of the brain; a slight effusion of serum or light-coloured water on the base of the brain outside of the dura mater. I attributed that to a rupture in opening the brain; might have been a slight effusion before; the colour and quantity would be increased by the rupture. I believe that the evidence of death in this case to be that of strangulation; from the post-mortem examination. I think none of the marks of violence on the head sufficient to produce death. The unusual turgid state of the lungs and their filling the whole cavity of the chest would be produced by the obstruction of the air-passage, arresting the air to the lungs; but in this case I have every reason to believe the obstruction of the air-passage was not complete at first. Some air passing back and forwards, mere occlusion of air would produce this turgid appearance of the lungs and veins; generally speaking, strangulation makes the eyes blood-shot, protruding and staring; makes the face distorted and livid, and the blood running in it; this is produced by pressure on the external veins of the neck; as soon as the blood in the lungs is deprived of air, vitality ceases; the circulation continued some time after the pressure; may find upon examination that no blood is in the veins. In this case, I suppose the windpipe was not completely closed, and the venous circulation went on till death took place; the heart was firm. I had no doubt as to the producing cause of this death or I would have made further dissection. I examined all the organs necessary to satisfy myself. I believe it was strangulation. Relaxation of the sphincters take place, and evacuations take place; the contents of the bowels are generally expelled; generally about the time death takes place the sphincters are relaxed; generally observed it so. Did not examine those organs. I was satisfied from the other appearances, and did not wish to subject the body to any unnecessary exposure and examination. I am a regular graduate as a physician. I have performed post-mortem examinations in cases of violent deaths, but not in cases of strangulation.

Cross-examined.—Have examined cases of death from injury on the brain and from poisoning; the contents of the stomach and bowels—can't say how many examinations of injury on the brain I have witnessed, but a great many in the country and in Philadelphia. I derive my knowledge from my profession and the practical knowledge of others and myself. I have not before examined a person strangled to death. Have drawn my conclusions from the conclusions of others learned in the profession; Beck's Medical Jurisprudence is a work of high authority.

Strangulation may produce apoplexy in one way, that is, apoplexy by full turgid appearance of the brain, but not the morbid appearance that generally leads to apoplexy; anything that causes determination of blood to the head may cause apoplexy, if the patient be predisposed to it. I can hardly say an unusual determination of blood to the head would cause apoplexy without predisposing causes; hereditary disposition is one. Inflammation or irritation of a peculiar kind another; relaxation or debility of these vessels when there is an opportunity for predisposing causes, at fifty is more usual; age may develop these causes, but age alone is not sufficient; other diseases may be developed at that age, and that would be a safeguard against apoplexy; hemorrhoidal discharges may act as a drain,

and the suppression of these discharges may occasion disease in other parts, as a predisposition to consumption. There is a distinction between sanguineous apoplexy and a serous apoplexy; the latter is from a relaxation. In the case of apoplexy I would look for effusion in the ventricles. It is generally so; Beck gives one instance where there was none; but I can't say, that, apoplexy. The examination was in the afternoon; some delay in consequence. In apoplexy always a determination of blood to the brain during life; when the post-mortem examination is deferred for length of time, in some cases, no cause can be discovered for the death; most writers who have made extensive examinations give a few cases as exceptions to the general appearances; the vascular turgescence in the brain may subside in a few hours, but then the whole system puts on the same appearance; you cannot find *any* morbid appearance. It is a peculiar habit of that body. In such cases the examiner will generally make a report that there is no morbid appearance to warrant death, and they are unable to ascertain what caused death; concussion of the brain, spinal marrow may take place and no morbid appearance observed; most generally so in concussion, but it is generally otherwise in apoplexy. In cases of concussion no morbid appearance; anything that causes suspension of respiration occasions determinations of blood to the brain, provided it be continued long enough and not momentary; turning of the head where there was a disposition to apoplexy may occasion it; but the individual has generally been unwell previously; suppression of respiration would be the cause of apoplexy. If the circumstances warrant it, I would swear positively to what I see. The vessels of the brain were unusually turgid and filled. Those are not evidences of apoplexy but of congestion. It is one of the evidences of death by suppression of respiration from violence, a small clot of blood on the right hemisphere of the brain, frequently found in apoplexy, but as frequently found in the substance of the brain as on the surface; if it be in the centre of the brain it may produce sudden death; the blood was in a fluid state. Think in apoplexy the blood would be found in a fluid state; am not positive. In hanging, death is produced by strangulation; sometimes by dislocation of the second vertebra, and sometimes by apoplexy; sometimes by laceration of the windpipe. The eyes frequently protruded, staring and blood-shot in death from apoplexy; but the pupils are contracted, not dilated. I judge that strangulation was produced by the fingers: can't tell how the tongs could produce strangulation; if they could obliterate the air-passage it might; if the tongs had been used there would have been marks directly across the throat. I examined the back part of the neck, saw nothing but infiltration of blood; the neck was not dislocated; I cannot say positively they were fingers; but I am not acquainted with any instrument that would have produced similar marks; the marks on the throat were not at all like any marks of the tongs; the marks were deeper than the discolouration, and some marks like a nail or gouge; I came to the conclusion they were made by fingers' marks; the fingers were larger than mine.

The infiltration of the lungs was caused by suppression of respiration; the more we find vessels filled, the longer respiration continued; might be slight respiration and not sufficient to stimulate the brain; death may take place very suddenly by excluding the air from the lungs. To fill the lungs there must be some respiration for a space of time. Think you could not suspend respiration suddenly by one or two hands on account of struggling, &c. There was no more room in the lungs for healthy respiration; will not say that the individual Betsy Holder died from debility but from stran-

gulation. There were no marks of violence on the body; putting the hand on the mouth would not suspend respiration, unless the nose was stopped also. There would not be discoloration on the face without very considerable grasp; no marks on the neck to warrant me in saying an instrument was used; if a gouge was used would occasion abrasion of the skin; the marks were not more than skin deep; an instrument might make such marks if held very carefully and the person remained still. I used the term half-rounding instrument to show the kind of marks, and not to convey the idea of an instrument being used. Eberle's Practice is a good work; not very scientific. It is a work intended for students.

Mental excitement produces apoplexy, but there you have the effusion which rarely subsides. Fear and joy have produced apoplexy, but not frequently. In diseases of the heart it will not present an healthy appearance, and not find it as this was. Thickening of the walls of the heart may produce disease, but not suddenly. Have been in the habit of examining bodies, but did not find disease without the patient exhibiting external evidence of disease.

I derive my opinion in this way: knowing the healthy appearance of the organs, I apply the morbid appearances as given by others and from my own knowledge; I speak from actual observation and from books. I commenced the study of medicine in 1823 or '24. Have practised in the S. Dispensary of Philadelphia; examined a good many cases there; it was generally the rule all persons that died of important diseases were examined. Strangulation may produce death by apoplexy; death may be produced in different ways by strangulation; effusion outside the base of the membranes not evidence of apoplexy. To the best of my knowledge, I believe I caused that effusion in opening the skull cap.

Dr. W. A. Smith testified, that he was present at the post-mortem examination of Elizabeth Holder, and assisted Dr. Rodrigue in making the same on the 1st of August, about three P. M. Some objections were made to the examination. After giving a similar account to that already detailed of the appearance of the body upon the post-mortem examination, Dr. Smith testifies: I formed the conclusion that her death was produced by strangulation; the whole venous system was a good deal gorged with blood; more particularly the lungs; the external marks of violence on the throat, and the marks of fingers induced me to believe death was occasioned by strangulation; the brain did not present those appearances natural in apoplexy, nor did the substance of the brain itself appear to be injected; on the other hand, the brain was rather pale and devoid of arterial blood. I remember that distinctly, in consequence of Dr. R. taking the small scalpel and slicing off a part of the brain to ascertain the fact; I feel satisfied that it was not a case of natural apoplexy; but that the distension of the veins of the brain, their turgid condition, could be attributed to nothing more than some mechanical pressure upon the neck preventing the return of blood from the head to the heart. I think on the left side of the neck were evidently the marks of two fingers; and the marks of a finger and thumb on the right side of the neck. Dr. R. placed his right hand over the mouth and on the throat and remarked, that that man must have had a very large hand, and remarked that he had a large hand and his was larger. Cannot recollect any penetration through the skin; I remember that during our examination we were compelled to move the body; the contents came out of the stomach. It is generally laid down by our best authors that in cases of strangulation, there are involuntary discharges from

the bladder and bowels a short time previous to death. We did not discover that the blows had effected any fracture of the skull-bone, and in regard to that clot of blood, it was merely a venous effusion, in a fluid state not coagulated; my own opinion was that it was from a direct blow, or it might have been the effect of a counter stroke, *i. e.*, a stroke on the other side of the head. I hardly think any of the marks of violence on the head sufficient to have produced death. I am a regular graduated physician; commenced study in 1828. Have performed or assisted to perform a post-mortem examination in a similar case; thought of the matter of apoplexy before it was mentioned here; think it did occur at the time of the post-mortem examination; subject of apoplexy came up at our examination, because Dr. R. made an examination of the ventricles of the brain to see if there was apoplexy; no coagulated blood.

Dr. Rodrigue called again.—As far as I remember, the lips were swollen and livid; no part more swollen than another. The wounds on the neck could not have produced death by lesions. The contusions were the evidences of force. In a mixed case of strangulation, we cannot say one organ suffers more than another; but the mere contusions would not have produced death. In this it was the injury produced on the brain, lungs, heart, and nervous systems. The principal nerves in the throat are the nerves, from the brain to the lungs; the pneumogastric eighth pair or par vagum. If sufficient degree of violence be applied to that nerve, death may be produced; if cut, instant death may be produced, particularly if separated near the lower jaw. They may be affected by mere pressure and produce death more slowly; it would then act by suffocation; destroying the connection between the brain and lungs. In apoplexy the bowels are usually costive; most generally so. In suffocation alone there is always congestion of the lungs. In suffocation alone no congestion of the brain. There was congestion of the brain in this instance. In mixed cases, we have congestion of the brain and lungs from strangulation; strangulation can produce both apoplexy and suffocation, and that would be what I would call a mixed case.

Looseness of the bowels not a predisposing cause of apoplexy. The suppression of that is a predisposing cause; a looseness of the bowels sometimes takes place in apoplexy; the eighth pair of nerves includes the carotid arteries.

From the marks of violence in this case it would have been unavoidable not to have grasped those nerves; no marks behind.

On the part of the prisoners but little testimony was produced. They account for their conduct in lurking around the country, by the fact, that the volunteers of Centre County had been out, partly with the intention of arresting them, and that on the night when the murder was committed, they were drunk and incapable of committing such an act, and that their clothes had been stolen from them, and they were ashamed to appear in public after losing their clothes; and again it was contended that no one saw them committing any outrage; that Elizabeth Holder died of apoplexy; and further it was contended by their counsel, that supposing the prisoners had killed her in the perpetration of a trespass, and that apoplexy was the accidental result of violence not intended to kill her, it was not wilful, or murder in the first degree.

Judge White, in addressing the jury, after defining murder at common law, &c., said: "It is for the jury to decide the degree of murder by their verdict from the evidence laid before them, and if the homicide took place in the commission or attempt to perpetrate the four offences (the last counts not being insisted upon), it is their duty to return a verdict of murder in the first degree, and the same if they find it was wilful, deliberate, and premeditated killing, the result would be the same."

"The indictment is in legal form, and if the means of death proved, agree in substance with the charge, it is sufficient; if the offence was by one of the persons, and the other was present, aiding, abetting, and assisting, the first count in the indictment must be sustained.

"The object of the indictment is to inform the prisoners of the offence charged, but the commonwealth is not required to prove the fact precisely as laid; if the kind of death proved agrees with the species charged, it is sufficient. If laid to have been effected by means of one kind of poison, as arsenic, and the proof is corrosive sublimate, it would be sufficient to convict the perpetrator. The first question of fact for your consideration is, was there a murder committed?—If the deceased died a natural death, if her death was owing to natural apoplexy, of course the prisoners are to be acquitted. After the inquest was held an examination was made by Drs. Rodrigue and Smith, and the result has been detailed to you by them.

"There are some questions, which a jury cannot decide from ordinary testimony, and among those in many cases, is the question whether death has resulted from violence or natural causes, and to ascertain the fact, medical men are usually appealed to to declare from their knowledge of the anatomy and pathology of the human frame. It is the business of their lives to acquire the requisite knowledge, and therefore the law places great reliance in such cases to the testimony of medical men, and without it, in many cases, the actual cause of death could not be ascertained. There is no evidence in the cause that the deceased had complained of any indisposition for any short time previous to her decease.

"If the death resulted from strangulation the charge would be supported, though it may have produced apoplexy, and that was the immediate cause of death, as upon an indictment for thrusting quantities of moss into the mouth of the deceased, (a child,) whereby it was choked, suffocated and strangled, and the evidence was, that the child was found with moss crammed into its mouth exceedingly hard, and a surgeon stated that the child did not die immediately from the moss, but that from the effects of the moss in the throat the parts were so much injured as to prevent swallowing and breathing, and that the bruises of the throat closed the passage and caused the death of the child; the conviction was held proper; so a wound, not mortal in itself, from *improper treatment*, turns to a gangrene or a fever; the party who inflicted the wound is guilty of homicide. It was sufficient

if the act done by the malefactor was the mediate cause of death, though it may not be the immediate cause. If, from the evidence, you believe that the violence on the throat of Elizabeth Holder occasioned her death, the offence of murder is made out; and the important question arises, was that act of violence committed by the prisoners at the bar? or were they participating in it?

"It is not pretended that any person saw them commit the act, and the charge is therefore supported by circumstantial evidence.

"This is the case on the part of the commonwealth, and from those facts and circumstances the prosecution contends that the murder of E. H. is established; that she was killed in the commission of a burglary, and that, therefore, it is murder in the first degree; and on that, even if it was not in the commission of a burglary, yet the means of death prove that the perpetrators committed the murder in such a manner as shows hearts regardless of social duty, and fatally bent on mischief. That the manner of the killing shows it was wilful, deliberate and premeditated, and therefore independent of the burglary, it was murder in the first degree, under the Act of Assembly, and that all the facts and circumstances in the case point out Patrick and Bernard Flanagan as the perpetrators of the murder to the exclusion of every other hypothesis.

"It has been urged that the individuals concerned in the murder may have entered the house as trespassers, and that, therefore, they cannot be convicted of murder in the first degree, as no express malice has been proved.

"Under our Act of Assembly as stated to you, the law is changed, and except in the cases enumerated, the malice required to constitute murder must be directed against a human being in order to make the slayer guilty of murder in the first degree; if the homicide is proved to have been *wilful, deliberate and premeditated*, no further proof of malice is required; it is not necessary to show any spite or grudge on the part of the slayer towards the deceased.

"In the present case. If the prisoners put E. H. to death by means of strangulation, the act itself, continued as it must have been for some length of time, would give time for reflection, and would show that the murder was wilful, deliberate and premeditated, and would constitute murder in the first degree under the act of 1794."

The case was then left to the jury, who, after an absence of two hours and a half, returned a verdict of "guilty of murder in the first degree."

His Honour, Judge White, then proceeded and passed the sentence of the law upon the prisoners, and they were remanded to jail to await the orders of the executive. On the 29th December, 1842, the sheriff of Cambria county received their death warrants, and the 3d of March, 1843, appointed for the execution of the prisoners. On the 27th February, 1843, a respite to 21st April, 1843, from the governor was received. On the 5th day of

April, 1843, the legislature passed a law directing Judge White to entertain a motion for a new trial, and in case of his refusal, directed the president judge of the fourth district to entertain the motion.

Judge White refused, and Judge Woodward, the president judge of the fourth district, declared the Act of Assembly of the 5th April to be unconstitutional, and refused to obey it.

On the 14th of April, 1843, the governor further respite them, but naming no particular date. On the 6th of April, 1844, a subsequent legislature passed an act authorizing one of the judges of the Supreme Court of Pennsylvania to come to Cambria county, and in connection with one or more of the associate judges of the county, to hold a special court of Oyer and Terminer to hear and determine a motion for a new trial.

Chief Justice Gibson, in a communication to the legislature, also declared this law unconstitutional, and suggested the passing of an act requiring *one* of the judges of the Supreme Court of Pennsylvania to hold a special court of Oyer and Terminer in Cambria on some day prior to the 4th day of July, 1844. This act was passed.

On the 1st day of July, 1844, the motion for a new trial was entertained before Justice M. E. Rodgers, and on the 10th of July Judge Rodgers delivered an able opinion overruling the motion, and directed the record in the case to be remitted back to the Court of Oyer and Terminer of Cambria county for execution.

The motion for a new trial was based upon declarations hostile to the prisoners, made by jurors before they were empanneled; declarations of witnesses inconsistent with their testimony on the former trial; excitement and prejudice against the prisoners at the time of the trial; and after-discovered testimony, all of which they failed to prove.

On the 7th of October, 1844, about eight in the evening, Jane Flanagan, a sister of the prisoners, obtained the keys of the room in which her brothers were confined, opened the door and the prisoners deliberately walked out with their irons on; a few hundred yards from the jail, they sat down in an out-lot, filed their irons off, and being joined by a person armed with a gun, made their escape to some friends in the neighbourhood, where they continued concealed until a tardy search, instituted five days after, was over.

The morning following their escape, the sheriff received their death warrant, which fixed their execution on the 8th of November following.

Thus ended a case which, for interference of legislatures, determination by some to shield the murderers, and the unpardonable negligence, to say the least, of officers, has no parallel in this country.

ART. X.—*Facts relative to the Contagiousness of Typhus Fever, confirmatory of Dr. Flint's observations on the subject.** By SAMUEL JACKSON, M. D., of Philadelphia, formerly of Northumberland.

IN the last number of this Journal, there is an interesting history of an epidemic typhoid fever which prevailed at North Boston, Erie County, New York, in the autumn of 1843, by Austin Flint, M. D., of Buffalo. It was made a question whether the disease could have been introduced into that town by a traveler who lay sick and died therein. Having myself no hesitation in giving full credence to the opinion that this disease is essentially contagious, and having, as I believe, seen epidemics excited by such means, I have thought it might not be unimportant to add to the communication of Dr. Flint, what little has come under my own observation. I am the more willing to do this, as in my various intercourse with physicians, I have found a striking discrepancy in their opinions with respect to the contagiousness of this fever, and even with respect to its essential existence.

If it be inquired what is to be understood on the present occasion by *typhus fevers*, we answer—those varieties of Dr. Cullen's *typhus petechialis*, called by him *mitior et gravior*, both long known and most admirably described, as far as relates to their symptomatology, by Dr. Huxham, under the names *febris lenta nervosa et febris putrida maligna*. As all our experience in this fever was obtained and digested under the old name, we cannot divide the disease on the present occasion into *typhus* and *typhoid*; we have been accustomed, moreover, to consider these as one fever in their cause, essence, and general effects. Nor is it our present business to show, whether they be one or two diseases, but merely to prove that there is a contagious fever with which we have been conversant, that has long been known under the name of *typhus*. The advocates of the late division into *typhus* and *typhoid* will be able to use our facts as certainly as those who do not acknowledge this division. In another place, we have given our reasons for believing them one fever as certainly as the scarlatina mitis and the cynanche maligna are one and the same.

We would here guard the reader against the presumption that we have been accustomed to confound the *typhus* with the marsh miasmatic fevers. We do not believe that these can ever be converted into *typhus*, and Dr. Flint, in the paper referred to, has very clearly ascertained the distinction. My private preceptor, the late Professor Barton, used to say, that *typhus* was the most contagious fever he had ever known, and the same doctrine was inculcated by Dr. Rush, (see his edition of Pringle, note 121.) If it be objected that Dr. Rush is here speaking of the *camp* fever, we have

* See preceding number of this Journal, p. 21.

only to remind the intelligent reader that we consider these fevers are one disease. We shall now relate a few instances which may serve to confirm Dr. Flint's opinion that his fever was imported into North Boston.

I. In the winter of 1828, there came a man sick of fever from Pottsville to his father's house, among the salubrious hills of Shamokin, about six miles east of Northumberland. He was attended by the two Drs. Robbins, of Sunbury, and died. The rest of this large family soon sickened, and from this house the fever soon spread among the neighbours, who had kindly attended upon them. Almost every case, as I was assured by the physicians, was accompanied by hemorrhage from the bowels, and certainly in my own practice therein, not one escaped this alarming symptom. To prevent this danger, it was my rule to bleed from the arm if called in time and the state of the patient did not forbid. Large and frequent blisters to the abdomen I never dispensed with, unless the case appeared mild and entirely free from danger. In one case wherein the patient, John Straw, was not considered seriously ill, both these prophylactics were omitted, but *væ medico*, on approaching the house in full hopes of finding him in a promising way, I was astounded with the news that he was dying. A tremendous hemorrhage had suddenly broke forth from his bowels, and he died in a few hours.

In this disease, I very easily recognized the *febris lenta nervosa* of Huxham, which I had often seen during the whole course of my previous practice of 16 years. It was calculated that not less than seventy persons were seriously ill of this fever, but how many died, I never satisfactorily ascertained. It was a region of which I knew but little, pertaining to the towns of Sunbury and Danville. The propagation of contagion is certain in country situations if a family is ill; for in such cases the benevolent neighbours attend day and night in rotation, generally in three or four times the necessary number, nor are they at all alarmed by the idea of contagion. They will often crowd all the sick into one apartment, which, in cold weather, is intemperately heated by a close stove. All these facilities obtained in this epidemic.

II. In the winter of 1829, Nathan Sterner went from Pottsville, where he had resided, to his father's house near Lewisburgh, and within 12 miles of Northumberland. He was soon taken ill of typhus mitior, and the family physician was called. I visited him in consultation about the 10th day, and he lived about ten days longer, exhibiting a fair specimen of typhus mitior. This family, who were strangers to me, I could not govern as I had been accustomed to do my neighbours, and hence they neglected my prophylactic advice almost entirely. The large family room was the sick man's chamber, and it was not *warmed* but *heated* by a close stove; the consequence was, that every member of the household and a few of the neighbours, who had assisted the sick, were seized of the same fever. They were all recovered under the care of Dr. Joyce, of Lewisburgh, and

principally by the corroborant method, thus showing that it was a typhus fever.

III. In the winter of 1821, Abraham Gulick, a respectable farmer near Danville, and ten miles above my residence at Northumberland, lay for several weeks in a low fever with hemorrhagic diarrhoea, in which he was attended by Dr. Petriken, of Danville. He lay in a room well heated by a close stove, and, as he was a man highly respected, he received the assiduous attention of his neighbours. Soon after his death, nearly every member of his large family and many of his neighbours who had spent much time in waiting upon him, were seized of the same disease in all its characteristics, particularly the bloody stools. Of these so many died that the whole vicinity was thrown into the utmost consternation. But the number of either the sick or the dead, I cannot recollect, and from certain circumstances, I apprehend that both were greatly exaggerated.

Some of these patients fell under my care in conjunction with my medical friends; and some who lived within the periphery of my own practice, I attended throughout their sickness. The fever was almost uniformly attended by slow hemorrhage from the bowels, and few patients recovered under 20 days, while some continued twice this period. The cases which I attended were mild and none proved fatal, therefore we can say nothing of the pathological lesions; nor, indeed, should we at that time have looked further than the brain for any organic cause of death. Peyer's and Brunner's glands were not then considered, and as to the hemorrhage, this was looked upon as a mere diapedesis, and therefore its origin not to be ascertained by dissection.

With respect to the contagiousness of this fever, there ought never to be a question. It must, however, be ever remembered that cleanliness and fresh air are almost certain prophylactics, and that the nurses who carefully use them will have little to fear. I do not recollect that I ever saw a case in my own practice, that communicated the disease. This good fortune is not arrogated as an honour to myself but to my preceptors in medicine. In the winter of 1819, I attended a son of one Mowrer, in Robin's still-house, near Sunbury. Both around and within the house, there was a vast collection of filth; the family consisted of the parents and ten children from three years old upwards, and they all ate and slept and dwelt night and day in the same room, well heated with a close stove. The patient was recovered after a long stupor and mild delirium, by favour, as was supposed, of an abscess caused by repeatedly blistering the suræ.

Very soon the father and mother were both seized of the same disease; they fell under the care of a Dr. K., of Sunbury, and soon died. Some days before this event an adult daughter sickened and was also attended by Dr. K. till late in her disease. When at last I was called by the guardians of the poor, she was hopeless and died in a few days. By this time some more of the family had sickened, and the filthy chamber, beds,

&c., being considered as the nidus of infection, the whole family, sick and well, were moved to a new house on a neighbouring hill leaving all their fomites behind them. Here the rest of the children quickly sickened, and we had nine patients for three or four weeks in the same room; even the first patient who had recovered under my care, went regularly through the disease again. They all recovered their health perfectly in a short time. But what I particularly wish to be observed in this case, are these facts: 1st, that this fever appeared to originate in the foulness of the old house in the depth of winter when the external air was excluded; and 2d, that four young women whom the guardians of the poor employed to nurse them after their removal and purification, entirely escaped the disease.

In the winter of 1814, when the volunteers and drafted militia were dismissed from their encampments near Philadelphia and Black Rock on the Niagara river, many of them had scarcely reached their homes in Northumberland and its vicinity, ere they were seized with the camp or typhus fever, in which several of them lay many weeks, exhibiting fair specimens of the slow nervous fever of Huxham. The disease was mild, not one died, hence we can give no history of the internal lesions; but the *prima facies*, to use a botanical expression, was that of typhus mitior, and the corroborant method of cure served to prove the nature of the disease, and to show its place in the nosological arrangement. Its cognition, indeed, can hardly be mistaken at first sight. Dr. Rush used to say that a painter could give the likeness of yellow fever in the countenance,—so we may say of the present disease. But to return to the subject of contagion, not one of these patients communicated the fever, though their sickness was in the depth of winter.

We are aware that the unbelievers in contagion and the advocates of the unitarian doctrine of fevers, have the means of explaining away the above facts to their own satisfaction; and did these facts stand alone in the history of contagion, we should not consider their reasonings as unworthy of a patient consideration; but since many others have seen and reasoned as we have done, it may not prove a work of supererogation to throw our mite of experience into the balance.

But it is inquired, *whence comes this contagious fever, and what is it?* We have never met with any contagious fever in our own practice; all the fevers we have seen appear to be of one stock, and all are cured by the same means. Even Dr. Armstrong contends that what is called typhus, of which he has treated so largely, is the same in origin as that from marsh miasma. What proportion of physicians reason thus, we know not, but the collective sect cannot be small. Dr. J. McCulloch says that the error of mistaking remittent fever for typhus “is so universal, that we trace it through almost every medical book, and so common, even to this hour, as to be committed every day by nine-tenths of practitioners.” (On Malaria, p. 190.) We hope, and even believe that the number is greatly

exaggerated. The error arises with some, from a misunderstanding of that hasty generalization which reduces all fevers to a unity of morbid excitement. How much time and how much reasoning Bacon has expended in trying to endue the human mind with patience of investigation and forbearance in the establishment of second causes! yet here, where every one is quite vain-glorious in proving himself a Baconian, the principles of the great philosopher are lost in the ambition of theorizing.

Thirty-three years experience have taught and confirmed us in the opinion that there are two genera of fever—the *inflammatory* and *typhus*, the latter professing something to which the other has no tendency, some incomprehensible unity which destroys the patient, sometimes independently of any ascertainable organic lesion.

One of Dr. Flint's collaborators considered his epidemic as remittent miasmatic fever "attended with typhoid symptoms." That the remittent fever is sometimes attended by "typhoid symptoms," taking the adjective in its etymological sense, there can be no doubt; but the opinion that Dr. Flint's epidemic was a fever from marsh miasma, we must consider as a dangerous error. The mere word *typhoid* is perilous in practice, for no sooner is a case of remittent fever supposed to claim this epithet, than it is associated at once with tonics and stimulants, which are not remedies, but absolute poisons. For, though the patient may be greatly broken down and appear most alarmingly typhoid, yet there is nothing typhous in the case, and the supporting treatment appropriate to typhus, will certainly aggravate the fever, and hurry the patient to the grave. When kind nature is gradually wearing away the inflammation that aggravates and prolongs the fever, nothing can be more mal-appropriate than wine, and snakeroot, and chicken water, and oyster juice, and quinine. It was in such cases that Baglivi exclaimed of the bark—*remedium damnabile et perniciosum*. The patient in remittent fever who is taking such tonics, is certainly almost beyond hope. There is latent inflammation of the brain or its membranes, or of the stomach and bowels, which precludes all hope from tonics and stimulants.

Thus, the typhous fevers are the very antipodes of the inflammatory, as it regards the method of cure. We are now speaking of the remittent fever as it *generally* appears in temperate climates, *nec vivo nec scribo in aero Romano*, but there are occasional exceptions, and these prove the rule. The remittent patient does sometimes fall into a state requiring early stimulation, and many such cases we saw during ten epidemics. The aged and debilitated, and particularly those whose constitutions were broken by intemperance, often needed immediate support; some of them, indeed, did not survive the first chill. But when the young and comparatively vigorous, are suddenly prostrated, it is owing to the violence of the remote cause, to idiosyncrasy, to mal-treatment, or some accidental circumstance; but this is neither typhus nor typhoid; the remote cause is, in such

cases, easily ascertained, and the cognition of the disease is recognized in the countenance. So true is this index to the nature of the fever, that I have tried in vain to persuade parents for their comfort, that their typhous children were merely labouring under a common remittent, a disease of which they had little dread. Almost every idiopathic fever has its peculiar countenance, the puerperal fever, and the yellow fever, as we have stated above, but particularly the typhous fevers, which are strikingly distinguished thereby from all others; their peculiar aspect distinguishes them from the first day to the last. It is the very same in the typhus of Louis as in his typhoid, however different their duration and their mortal lesions.

¶ Dr. Armstrong seems to distinguish between typhous and remittent fevers when he maintains the opinion, that they have one common origin in marsh miasma. He says "it might be interesting to know, why in one person typhus assumes an *intermittent*, in another a *remittent*, and in a third, a *continued* character. This may depend on two circumstances, 1st, on the degree of concentration in which the miasma is applied, and 2d, on the condition of the body at the time of application. If it be applied in a low degree of concentration, or to a subject whose internal organs are sound, it seems to produce an intermittent fever: but if applied in a very concentrated form, or to a subject whose internal organs are weak, then it puts on the remittent or continued character."

If these two apparently distinct fevers can spring from marsh miasma, how is it that typhus is almost never found on the banks of our rivers in the summer and autumn, not even two or three cases during long-continued and severe epidemics of remittent fever? We saw this pervading the country most deplorably during ten summers and autumns, and only two cases of the many thousands that came under our care, did we consider as *typhus*, and these occurred in the cold weather of November. Now, had marsh miasma the power of kindling *typhus*, it might be expected that we met with it frequently during the summer and autumn, when the whole atmosphere for five or six months was a mere ethereal tincture of this poison, and when thousands of all varieties of constitution suffered, many of them, repeated attacks of remittent fever during ten epidemics. Surely, among all these, there were some "*whose internal organs were weak*." But, let us carry the doctor's argument into jails, ships, and into the subterranean mansions of the Spitalfield weavers, surely there may be found here some robust subjects, who ought, according to his theory, to assume an intermittent, to be cured by an ounce of bark. When the judges and lawyers, and juries at Oxford, Exeter, and the Old Bailey, were infected in the open air of the courthouse, by the mere smell of the foul clothes which covered the prisoners who were yet in health, surely this temporary exposure of full-fed gentlemen ought to have produced a mild intermittent. The truth is,

that the disease corresponds with the remote cause; whoever inoculates for small-pox does not expect a crop of measles.

We hope we are not pursuing this subject too far; Dr. Flint thinks it highly important to settle the question involved in this paper, and Dr. McCulloch says (on Malaria, p. 190), that the error of mistaking remittent fever for typhus, confuses the whole history of endemic and epidemic fevers; that it has produced a train of incalculable evils in the cure, as well as far deeper ones in their prevention; that medical history is full of glaring examples of this; and that we must, consequently, read with distrust nearly all that has been written on the diseases of armies. If only the half of this be true, for we are very willing to make liberal deduction on account of an author's zeal, the subject requires both abilities and preparation which the present writer does not possess. He will, however, offer a parallel between the two diseases which may possibly show that, like parallel lines, they can never coincide.

We subjoin in parallel columns, the distinguishing symptoms of typhus and remittent fevers:—

TYPHUS.

A disease of cold weather and the colder climates; it seldom ever springs up even in single cases in the summer months.

It evidently arises from clothes, &c., foul with perspirable matter and shut up from the air, or long worn in confined situations, as jails, ships, &c.

It is contagious, and particularly so in cold weather, when little or no ventilation is used.

Move a healthy person from a healthful region to a place where he may smell clothes long foul with human perspiration, and he will probably contract a disease with which he can infect his friends on returning home.

Negroes more certainly take this fever and generally have it more severely than the white inhabitants.

Typhus seldom invades old people, and not often children under two years old.

Typhus never runs into an intermit-tent, and bark has no specific agency in its cure.

REMITTENT.

It is a disease of hot weather and warm climates, and the hotter the weather the more violent the disease generally is.

It arises evidently from marshy grounds, the dried beds of rivers, and from argillaceous lands which break into deep fissures under a burning sun, and exhale something known only by its effects.

It is never contagious, not even when protracted into cold weather and several are confined in the same close and heated room.

Take a healthy man from a healthful region into an atmosphere of marsh miasma, and he will contract an intermit-tent or remittent fever which he cannot communicate on returning home.

White people suffer more from remit-tent and intermit-tent fevers and are more certain to take it from the same exposure.

It invades all ages, from ten days old to the extreme verge of human life.

Remittent fever often runs into the intermit-tent form, and is forthwith cured by bark.

The urine in mild cases unattended by much inflammation, is pale and whey-like.

Typhus more generally affects the brain and its membranes, the lungs, the region of the ilio-cæcal valve, and the crasis of the blood.

In typhus there seems to be a slow, concealed, and suffocated combustion, hence the word is derived from *τυφεῖν*, to smoke.

It comes on generally without shivering, and without pain; but with debility, lassitude, depression, stupor, indisposition to exercise either body or mind, and in the *mitior* there is often a diarrhoea which is not bilious.

In the *mitior*, there is frequently an eruption of rose-coloured spots over the abdomen and breast. In the *gravior* and the *petechialis* there are frequently vibices and petechiæ.

It is very often attended by low delirium, carpologia, subsultus tendinum, and nervous symptoms generally.

Hemorrhage is very generally a dangerous symptom.

It bears very little bleeding or medical debilitation in any way, whether the cases be mild, severe, or most severe.

The urine is red in remittents, as it is in all inflammatory fevers.

Remittents generally affect the liver, spleen, stomach, and membranes of the brain.

In remittents there is generally pretty severe inflammation, open, and blazing—not concealed and smouldering.

It invades with shivering, and with pain in the back, limbs, and head. It often invades with a vomiting and purging of bile.

In this there is no peculiar eruption.

Remittents are very seldom attended by low delirium, subsultus, carpologia, or any symptoms peculiarly nervous.

Hemorrhage is seldom dangerous, often highly beneficial.

This bears very free depletion in every way, and when internal inflammation threatens, large, and frequent bleedings are salutary. Malignant cases are exceptions to the general rule.

ART. XI.—*Plastic Operation for Ectropion.* By DANIEL BRAINARD, M. D., Professor of Surgery in the Rush Medical College. [With a wood-cut.]

THE subject of this operation was a young man about 20 years of age, who had received a severe burn from falling upon a bed of burning coals, by which a great part of the left cheek was entirely destroyed, and a cicatrix produced, which, by its contraction, occasioned a complete eversion of the inferior palpebra of that side, and a considerable contraction of the corresponding angle of the mouth.

Five months after the accident, January 2d, 1845, he applied for relief. At this time the eversion of the lid was complete, its ciliary border being firmly adherent to the inferior margin of the orbit, and its inferior edge

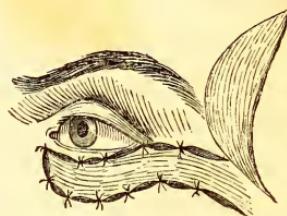
projecting upwards towards the globe of the eye. The conjunctiva was much inflamed, so as not only to give the eye an unsightly appearance, but also to render it the source of very considerable pain and inconvenience.

Finding that the ordinary operations for the remedy of similar deformities were inapplicable to this, I determined to put in execution the following: The palpebra was first dissected up, so as to be placed in its natural position, by which a wound was left beneath it, an inch and a half in length by three-fourths of an inch in breadth. To fill this a flap was formed behind the external angle of the eye of corresponding form, but somewhat larger, to make allowance for contraction, the attachment of which was over the anterior part of the zygomatic arch. This being turned upon its base, was brought into the space left by raising the lid, and retained in that situation by stitches of interrupted suture. The sides of the wound left by the removal of the flap, were then brought together and retained in the same manner, and only simple dressings were applied. The accompanying sketch representing the appearance of the parts when the flap had been fixed in its new situation, will at once render intelligible the above description. Perfect adhesion took place by first intention, and at the end of two weeks, the patient was able to return home, the palpebra having its natural position and both the deformity and inconvenience resulting from it were almost entirely removed.

Remarks.—Operations for the restoration of the eyelids when these have been more or less extensively destroyed, have often been performed. Not unfrequently, this has been effected by appropriating a sufficient quantity of tissue from some of the surrounding parts. More recently an operation has been put in practice, which consists in the removal of a portion of integument from the temporal region. The cicatrization resulting from which by the contraction which it produces, has a tendency to bring the everted lid in contact with the globe of the eye, an effect which may be easily appreciated by simply raising the skin behind the external angle of the eye, in a fold with the fingers. The above described operation consists in a combination of these two methods, the space left by the flap assisting by its contraction in restoring the lid to its position, while the flap itself supplies the place of the part destroyed.

The deformity of the angle of the mouth was removed by Dieffenbach's operation.

CHICAGO, May 1st, 1845.



ART. XII.—Knots on the Umbilical Cord. By C. WATERS, M. D., Montgomery county, Maryland.

KNOTS upon the funis umbilicalis have been noticed and regarded as the cause of danger to the foetus in utero, or at the time of birth. I have not examined every case that came under my care, especially with a view to detecting this condition, but I have observed three cases within a few years and am therefore disposed to regard it as more frequent than is usually supposed.

Sept. 6th, 1841.—I attended Mrs. —— in labour with her third or fourth child. The labour was natural and quick; the infant was a large female. “The cord was tied in a knot about a foot from the umbilicus, and the noose was drawn as closely as it could be without interrupting the circulation.” Mother and infant did well.

Nov. 24th, 1843.—Called to Mrs. —— in her second labour. The cord was drawn tightly around the neck of the foetus and I drew it downwards over the head, before the latter was delivered. “The funis was very long” and tied in a knot. Mother and infant both did well; but at the moment of delivery the knot was so tight that pulsation in the cord was very feeble and slow, and the child made no efforts at respiration. On loosening the knot and applying a stimulant to the surface, the pulsation grew stronger, the child breathed, and I soon removed it. The infant was a large girl.

This case suggested to me the propriety of examining the whole length of the cord in all cases of still-born infants. Had I not detected and loosened the knot, this child would perhaps have been lost. I do not recollect ever having heard or seen the propriety of this examination suggested by any one.

June 13th, 1845.—Visited Mrs. —— in labour; the mother of a numerous family. The funis was drawn around the foetal neck and I gently removed it before delivery was completed. The cord was about two feet nine inches long, and there was a knot drawn pretty tightly, but not so as to interrupt the circulation, about two and a half inches from the umbilicus. The infant was a healthy girl, and, as well as the mother, did well.

All three of these cases occurred in the humbler walks of life, and the patients were in the regular habit of taking much active exercise.

REVIEWS.

ART. XII.—*Causes générales des maladies chroniques, spécialement de la Phthisie Pulmonaire, et moyens de prévenir le développement de ces affections, &c.* Par A. FOURCAULT, de l'Académie Royale de Médecine. Paris, 1844.

On the general causes of chronic diseases, particularly consumption, and the means of preventing the development of these affections, &c. By A. FOURCAULT. Paris, 1844, pp. 480.

IN 1840 the Montyon prize of the French Institute was conferred upon M. Fourcault's experimental essay on the functions of the skin; the present work is mainly the application of the principles then established by the same author, to explain the causes of and to discover a rational mode of treating many chronic affections. He, in common with the most reflecting among scientific physicians saw that medicine had come to a pause, that in pathological anatomy the field of discovery was well nigh exhausted; that symptomatology, so far at least as chronic diseases were concerned, had nearly reached perfection, while the same class of disorders continued to be almost if not quite as rebellious to the power of art, as in the most uncultured age. The medical profession, too honest for its own immediate profit, confessed its impotence, and saw, nay, at this moment sees, thousands of patients flocking to homœopathy, hydropathy, and other deceptive systems, whose peculiar province it is to *promise* the cure of chronic disorders of every kind, including consumption. What matters it that so much time and labour have been consumed in tracing the history of tuberculous depositions from their first appearance to their final and fatal stage, if, after all, the disease must be confessed incurable? Indirect and secondary service the knowledge of this history does indeed render, for it puts it in our power to discriminate between incurable cases of phthisis, and curable cases of other diseases which only resemble it. Such knowledge is indeed precious, and it has not perhaps been too dearly purchased, but it is not that which was proposed as the object of the researches that have been made, nor that most to be coveted. If the study of the natural history of a disease does not lead to its prevention or cure, it deserves no higher title than that long since applied to the expectant method in therapeutics,—“a meditation upon death.” Fortunately for the progress of science, happily for the encouragement of all who are inclined to despond when they reflect on the febleness of art, no truth can be discovered without profit. No matter how insignificant in appearance, no matter how isolated, no matter how anomalous, every truth conceals the germ of some other truth, and though, like the seed of plants it may long lie buried and forgotten, it will one day show that it contains a principle of life, and that it forms a fitting portion of the great harmony of nature. Let this console us when we see men starting from falsehood to run into error, building up theories which seem fair and strong, but which rest upon the basis of imperfect or counterfeit facts; let us feel sure that there is some solidity in the foundation though the corner-stone may be unsound, and that a permanent structure may yet be reared in the place of that which the

next tide of opinion must sweep away. It would be easy to show that the minute study even of incurable maladies is highly profitable, not only because it leads to experiments which may result in a palliative treatment, but because it fixes the attention on the generation of the disease, leads to a discovery of its causes, and ultimately to the means of its prevention. The mode in which disease is generated, the connection between its active external causes and the primary physical change, the produce in the economy, is evidently the first point to be ascertained, if possible, in settling its prophylaxis. The organic lesion of the solids, that of the fluids, and their atomic or chemical alterations, together with the mode in which external causes produce these alterations, such are the elements needful to be known before it is possible to *explain* the influence of any preventive system in medicine. The method must be established by observation and experiment, that is, empirically; the *rationale* of the method is merely the demonstration that it belongs to some class of facts already known, or falls under some principle previously settled. But the method is neither better nor worse because its rationale is understood. The distinction which is here insisted upon should never be lost sight of in philosophical investigations, and especially in all discussions relative to the connection of cause and effect; for although there may be a constant and uniform relation between an antecedent and its consequent, the bond which unites them may be quite invisible, nay, altogether inscrutable. There is an evident connection between depletion and the cure of inflammation; but who has explained in what it consists? Mercury favours the removal of plastic deposits, but who has definitively settled the *modus operandi* of mercury? Yet we no more doubt the real influence of these two remedies, than if we were in the secret of those mysterious processes through which their useful results are accomplished. When, therefore, an author professes to teach us the mode in which a particular disease or class of diseases is generated, and by observation clearly establishes a connection between certain external causes and the disease or diseases, and then adduces analogical proof in order to show the manner in which the causes and their effects are bound together, it is evident that the two portions of his argument are of unequal value; we are obliged to assent to that which is based upon correct observation, but we are at liberty to reject that which has only the force of analogy. The one part is proved, the other is, at best, only probable.

In the work before us these two sorts of argument are adopted. The author endeavours, and we think successfully, to show that the most common causes of chronic diseases are inaction and moisture combined. So far his theory is a pretty accurate generalization of facts. Further, he demonstrates experimentally, that several chronic disorders are produced in animals by arresting the secretory function of the skin. Finally, he concludes that consumption, albuminuria, &c., result from a deficient action of the skin, depending upon inactivity, moisture and their various combinations with other secondary agents. Now the value of this conclusion is entirely dependent on the closeness of the analogy between the condition of the animals in his experiments, and that of human beings subjected to the causes of disease indicated by him. But whether this be greater or less, and whether therefore the conclusion be more or less accurate, the truth of the first proposition, of the etiology that is, attributed to chronic maladies, is not in the least weakened, nor are the therapeutic, or rather prophylactic methods which it suggests, at all less worthy of being examined, and tested in practice. In the notice we are about to give of M. Fourcault's

work, we shall, for the reasons now assigned, dwell principally upon his description of the causes of chronic disorders as established by observation, adding, however, the explanation to which his experiments on animals conduct him, but without admitting either its correctness or its necessity.

In examining what has been written on the etiology of phthisis one cannot help being struck with the almost entire absence of satisfactory information upon this point. Amongst the reasons of this defect, one is very evident, that nearly all the statistics relative to the disease have been furnished by hospitals, prisons, and other public institutions whose inmates are taken almost exclusively from the lowest classes of society in large cities. Thus are left out of consideration people of the middle and upper ranks, and nearly the whole rustic population, and yet nothing can be clearer than that a comparative statement of the frequency of consumption in different classes, occupations, localities, &c., can alone lead to a knowledge of the general causes which influence its production. This, M. Fourcault professes to have accomplished. His observations were made in France, Italy, Belgium, Holland, and England, in hospitals, asylums, public workshops, houses of refuge, various manufactories, and agricultural settlements, and yet he was able, as we shall presently see, to detect the same class of causes operating uniformly under all these different circumstances, wherever consumption and certain other chronic disorders prevailed.

The first of these causes he describes as the influence of sedentary pursuits and of *récclusion*, which word includes want of exercise, light, and air. Although most writers upon etiology and hygiene have pointed out the evil effects of unremitting labour in close, dark, and badly ventilated rooms, they have not exhausted the subject, nor shown the reason of the singular uniformity with which the same diseases are produced under similar circumstances. They have dwelt chiefly upon secondary causes, or those affecting particular organs, such as position and foul air with their relations to hæmatosis, rest and bad food with their influence on nutrition, &c. Our author without denying to these agents a share in generating disease, finds that his facts contain the expression of a more general and primary cause, to wit, the derangement of the excretory functions of the skin.

In France, towns with a population of about two thousand souls, composed chiefly of farmers, mechanics, and persons of small fortune, owe from one 40th to one 60th of their mortality to consumption, when they are situated on mountain slopes, on high table land, in dry and open valleys, or in fertile plains. And even then the disease is extremely rare amongst those who till the earth or are employed in very active labour of any kind, while its victims are taken almost exclusively from amongst the sedentary, those who exercise only their fingers or hands, who are rarely in the open air and never exposed to bad weather. Such are sempstresses, dressmakers, ironers, embroiderers, spinners, weavers, tailors, and turners, and females who lead an indolent and luxurious life. On the other hand butchers, blacksmiths, wheelwrights, carpenters, cabinet makers, drovers, road-makers, carters, and day labourers, with women who work in the country exposed to every kind of weather, for the most part enjoy an exemption from the ravages of phthisis, except where the climate or the locality is habitually damp. It is not sufficient that the individual's trade should expose him to moisture; so long as his labour maintains the free action of the skin he is in no danger. Hence tanners, wool-washers, washerwomen, soap-makers, are remarkably free from consumption. Even coal-miners, if they do not remain very long under ground, are not often attacked

with consumption, because, in spite of the darkness, dust, and moisture, in which they work, the perspiration is kept up by the severity of their toil. No doubt that insufficient and unwholesome food increases the energy of the causes now mentioned, or rather diminishes the power of man to resist them, especially in damp climates. But in villages occupying salubrious sites our author declares that although he has seen much extreme poverty, he has observed very little consumption. There the cottages were often open to the four winds of heaven, the children barefooted tramping through the mud, and their parents with scarcely a rag to their backs, daring the cold blast of winter, that they might beg upon the highway. And yet colds and croup are rare amongst such people. It is well remarked that wild animals, the horses of our prairies for instance, have the most beautifully smooth and glossy coats, and are full of life and vigour, while our domestic animals are only preserved from the glanders, cutaneous eruptions, &c., by the removal with the curry-comb of the crust which rapidly forms upon their skin when confined to the stable. The frequency of tuberculous disease in cows and dogs, and in animals exhibited in menageries, affords another illustration of the importance of air and exercise to health, while it is confirmatory of the opinion than an intimate connection exists between the health of the skin, and that of internal organs. A curious fact to the same purpose is recorded by Parent-Duchatelet. He mentions that a large number of prostitutes who have abandoned their infamous trade and entered the houses of reform where they are employed chiefly in needle-work, die of consumption and other chronic disorders, whereas they are fresh, fat, and healthful so long as they are free to pursue their business in the open air and in all weathers. In religious boarding-schools and convents where the exercise is unfrequent, or restrained within very narrow bounds, all the signs of a lymphatic constitution are developed, and scrofula and consumption decimate the ranks of the pupils. When want of exercise, light, and air, begins to act at birth, we find its subjects presenting, during infancy, many cases of rickets, somewhat later of scrofula, and, after the age of puberty, those who have survived are extremely apt to perish by phthisis. Or the predisposition may be cured by a change of life. Thus at Scheveningue, in Holland, a fishing town of about 5000 inhabitants, phthisis is a rare disease; and yet the children who crowd the narrow houses of the poorer inhabitants are very subject to scrofula. But no sooner do they reach an age at which they can be useful at sea, than their scrofulous disease, and even their tendency to it, is cured, not by saline emanations, as some would have it, but by fresh air, the light of heaven, and active exercise. In comparing the mortality of the almshouses in large cities with those in the country where the paupers are obliged to work in the open air, the difference is found to be enormous. To cite a single example of the comparison; the mortality in the former was 1 in 16, and in the other only 1 in 75. Again on comparing the mortality of the poor-houses of Holland and Belgium with that of the population in general, it appears that the former is about five times greater than the latter. "How many," exclaims our author, "how many of those whom the law ought to protect, are literally condemned to death for having asked charity!" We commend this fact to those who have the making of our poor laws and the management of our paupers. It is bad enough that the public should be made to pay first for erecting an absurd palace, and then for the support in it of some hundreds of lazy vagabonds, but it is far worse that the people should also pay for rendering these persons a still heavier burden upon society. Why

are they not made to work, not at picking oakum nor even at weaving, which sooner or later enervates and injures them, but at such occupations as shall stir up what little manliness is left in them, to make them feel the dignity of honest labour, and blush at eating another man's bread? It is a very questionable benevolence that degrades the object of its charity.

In prisons and penitentiaries there appears to be the same tendency to the production of scrofulous and tuberculous disease; in many of them the deaths from phthisis exceed one-half of the total mortality. A remarkable exception is furnished by the military prison of St. Germain-en-Laye, an exception, however, which confirms the rule: for that prison is in a lofty situation; the prisoners are obliged to exercise a great deal, and they work in large and well-ventilated rooms.

In our Eastern Penitentiary the deaths from phthisis and scrofula alone amount to nearly seventy per cent. of the whole mortality, if we may take the reports of four years as affording sufficient data. Doubtless many of the prisoners have their health greatly impaired at the commencement of their incarceration, but we cannot suppose that this fact would explain the enormous mortality amongst them from a single form of disease.

M. Fourcault derives additional conformation of his views by observing the influence of manufactures, asylums, &c., on the children who are brought up in them. Everywhere he finds the greatest number of victims to disease of the bones, to scrofula, and consumption, among those who are most closely confined to their tasks. In the general hospital of Lille, which is also a workhouse, there is a large number of children of both sexes, foundlings and orphans, who have been kept in the country until able to work, and then brought into the city. The girls occupy large and well-aired halls where they are employed in needle-work; the boys are hired to tradesmen in the town. The latter retain their good health; the former, on the contrary, wither in the midst of a precocious growth: they become chlorotic, their catamenia are irregular, and the greater number of them die of marasmus, rickets, scrofula, or caries of the vertebræ; very few, indeed, are cut off by acute disorders. At Vienne, the girls in a charitable institution were peculiarly subject to chronic disorders. Their physician observing that the windows of the room where they worked were very much obstructed by the foliage of some mulberry trees, caused these branches to be pruned, so as to admit more light and air into the building. The result was very gratifying, for the scrofulous affections of the eyes, skin, &c., of the inmates were considerably diminished both in frequency and severity. At Marseilles, in an orphan school, which has every advantage of situation and interior arrangement, there were 45 deaths by phthisis, out of a total of 68, during 21 years. In the town itself, this malady prevails to a frightful extent amongst the shoemakers, while it passes by the labourers, fishermen, sailors, and others who work on the wharves, and are exposed to the dampness of the open air. These facts show that exercise is not less essential in warding off tubercular disease in warm than in cold climates.

Not many years ago, it was the fashion to accuse the manufacturers of England with being wholesale murderers. We were told that the children employed by them did not long survive in an atmosphere loaded with dust, and that they perished by consumption. It now appears, however, that manufactories are prejudicial to the health only when the operatives are crowded together in small rooms, and obliged to work for too many hours at a time. Then, indeed, all the diseases of a lymphatic constitution

prevail amongst them, not because they inhale particles of cotton, or other material, but because they breathe an impure atmosphere, maintain the same position, often from sunrise to sunset, are half-starved, half-clothed, and utterly hopeless. The tables of mortality prepared by the British Registrar-General, the testimony of witnesses before parliamentary committees, the publications of physicians in the manufacturing districts, all combine to show that scrofula and consumption are not only not caused by factory labour, but rather prevented by it; and that whatever superior mortality may exist in manufacturing communities over rural districts, must be attributed not to the factories but to the dampness, ill ventilation, and vice of the large towns. The conclusions of English observers are fully confirmed by the researches of M. Fourcault, and by those of M. Villermé in France. All these authorities concur in the statement, that upon analyzing the cases of phthisis, scrofula, &c., actually occurring amongst those employed in factory labour, by far the greater number of them are furnished by the workmen whose occupation requires them to remain very steadily in the same position. Thus, at Lyons, an immense proportion of the silk weavers die of consumption. Many of these toil from sixteen to seventeen hours out of the twenty-four, and during the whole of that time the left leg of the workman remains almost motionless, and becomes cold, swollen, and varicose. Of course all the evils inherent in a trade like that of the hand-loom weaver are aggravated by incidental causes, such as the want of work and the reduction of wages caused by embarrassments in the commercial world. In other towns in the south of France where silk is manufactured, a similar frequency of phthisis is to be observed, and in the hospitals of these towns the mortality from tubercular disease is nearly one-third of the whole. In other manufacturing towns, those for instance, where cloth is made, the proportion is considerably less; but there the labour is conducted in spacious halls, and demands a good deal of activity and strength. On comparing the statistics of the large hospitals of Amsterdam, Lyons, Bordeaux, Arles, Rouen, and Paris, it appears that the average mortality from phthisis is very nearly the same in all of them, although the climates of the several places are very unlike each other. But, as remarked by M. Fourcault, it is not to be forgotten that the social and hygienic conditions of the inmates of all these hospitals are almost identical. They are equally ill-lodged, ill-fed, and accustomed to live in dark, damp places; in other words, they are exposed to causes of phthisis hardly less active under a southern than under a northern sky. The influence of climate, however, is shown by the mortality amongst persons less exposed to the other causes of consumption, soldiers for example. It appears that those of Holland are very subject to this disease, those of Belgium less so, of France still less, and of the French army in Algiers, least of all. In the first-named place, the mortality may be computed at about one-third, but in Algiers it does not exceed one-hundredth of the whole. Consumption is said to be much more prevalent amongst the infantry than amongst the cavalry. On the other hand the superior efficacy of other causes than climate is shown by the comparative statistics of consumption in Rome and Naples. The former city is subject to very sudden and extreme changes of weather, yet its principal hospital does not furnish more than one-half as many cases of phthisis as does the corresponding charity of Naples, whose climate is more steady and mild. In the Neapolitan hospital, M. Fourcault states that nearly all the cases of tubercular disease observed by him, were in persons of sedentary pursuits, or who occupied damp, and close rooms. Not one

of them was from among the sailors, fishermen, hackney coachmen, or *lazzaroni*, all very numerous at Naples, but all living habitually in the open air.

In view of all these facts M. Fourcault appeals to parents and all who have any controul over the physical education of youth, to governments and all who can improve the sanitary condition of the poor, to aid in arresting the waste of life which can be attributed to want of air, exercise, and light, and the consequent suppression of the cutaneous transpiration. The means proposed by him we shall notice hereafter.

After a short chapter devoted to showing that quadrupeds are, quite as much as the human race, disposed to become tuberculous under the influence of the causes which have just been enumerated, our author passes to the consideration of the connection of humidity with the development of chronic disease. And here he has reference chiefly to moisture depending upon atmospheric causes, rather than to that existing in the cellars, lanes, and courts of populous towns. This cause had by no means escaped the notice of medical writers, amongst whom M. Fourcault refers to Hippocrates, Aretæus, and Sydenham. Even Broussais, whose hypothesis concerning the generation of tubercles was made to square with the rest of his system, bears witness to the fact that the moist climate of Holland is very productive of consumption. Moisture will act variously according to the temperature of the air, and its state of calm or motion. With a steady and high temperature it gives rise to disorders of the head and bowels; with sudden, and especially periodical changes of temperature at short intervals, it generates intermittent fevers, and congestion of the abdominal viscera; with a low temperature it causes affections of the lungs and dropsies; and in all these instances, according to our author, by its action upon the skin by the arrest of its perspiration. The influence of a moist atmosphere is visible in comparing the mortality of towns and villages in elevated positions, with those situated in close and damp valleys. In the latter, the deaths by consumption form about one-eighth or one-tenth of the mortality, but in the former not more than one-fiftieth, sometimes only one-hundredth. In the valley of the Eure is the town of Anet, and not far from it is the village of Ezy. But the town occupies an elevated and sandy part of the valley, exposed to every wind, while the village lies low, being also sheltered on two sides by hills, and on the other two by lofty trees. In the former, acute diseases prevail, and the mortality from consumption does not exceed one-fiftieth; in the latter, scrofula and other chronic disorders abound, and about one-eighth of the deaths is owing to consumption. The two portions of the village of Fontenay-Saint-Père, present a state of things almost identical with that just described. So, too, if we examine the effects of moisture in large towns, we find that the same diseases prevail wherever its influence is manifest. The higher and dryer parts of the city present a great many cases of acute disease, the lower parts, especially when the streets are narrow, and the houses crowded, damp, and high, abound in scrofulous affections of every sort. If, in the same way we compare countries which enjoy a dry climate with those whose atmosphere is constantly moist, we shall arrive at the same result, that is if we compare together the entire population of each, and not that merely of cities, for in them the local causes of chronic disease exist almost equally in all climates. Thus, we shall find that in Great Britain and Holland, where the atmosphere is saturated with moisture, scrofula in all its varieties, and pulmonary consumption are the most prevalent and fatal maladies. From one-sixth to one-fourth of the

annual mortality of England and Wales is due to phthisis; and the proportion would be, our author believes, still greater but for the traveling propensities of the inhabitants, the large number of them employed in the national and commercial navy, and their immense consumption of "rosbif" and "beefsteaks," by all which the strumous diathesis engendered by the climate is more or less corrected.

It has long since been noticed that in situations where intermittent fevers prevail, consumption is a very rare disease: the one affection seeming to exclude the other. Some physicians of note, but who were more ready to jump to a conclusion than to reach it by careful induction, at once determined that if these things were so, there could be no better residence for their consumptive patients than on the edge of a swamp, forgetting that it is one thing to prevent a disease, and another to cure it, that a very different process is required to prevent one's receiving a pistol-ball in his body, from that which is needed to extract it or to render its presence innocuous. The fact above alluded to is certainly very curious, nor has any satisfactory explanation of it yet been given, but it would be more curious still if we were to admit with M. Fourcault, that the causes of phthisis and intermittent fever are essentially the same. Our author is a stanch anti-miasmatist, and accordingly finds it easy to account for the production of intermittent fevers by moisture, heat, and diurnal vicissitudes of temperature, conditions no doubt favourable to the generation of those diseases, but which cannot be admitted to be alone adequate to such an end. However this may be, it is very certain that if moisture causes intermittent fever, it is by a sudden and temporary impression upon the system, and that when it causes phthisis it is by a slow and gradual action, and by combining its influence, not with heat nor with a changeable temperature, but with a pretty uniform coldness of the external air or of the place inhabited by the subject of the disease.

In some remarks on the influence of physical agents on the development of the organism, M. Fourcault contrasts the high stature and symmetrical forms of the inhabitants of plains and mountain sides, with the short and awkward figures of the dwellers in deep and narrow valleys where the air stagnates and the sunlight penetrates imperfectly. To the last-named circumstances he attributes the origin, at least, of cretinism and goitre, admitting their perpetuation by inheritance. In support of this opinion he adduces the gradual degeneration of the race in places where manufactures, upon the old system, have been long established, in coal districts where mining has been long carried on, and in some of which it has been found impossible to raise conscripts of the legal stature; he refers also to the diminutive persons of the Laplanders who pass the greater part of their lives in burrows under the snow.

We have now presented the first branch of M. Fourcault's argument, the facts which go to show the very important part played by several agents, such as moisture, and a want of exercise and air upon the production of scrofula and tubercles, and we might, with propriety, proceed at once to develop the plan which these considerations clearly suggest for preventing the diseases just mentioned. But we prefer giving a statement of our author's experiments on the functions of the skin, because they are in themselves very interesting, because they add to our store of physiological and pathological facts, and because they will afford to those who must have everything explained, a very ingenious *rationale*, and one that will answer quite as well as another until the advent of the next new hypothesis.

The experiments of M. Fourcault are, as was allowed by the committee of the academy to whom his memoir was referred in 1840, entirely original. His object was to determine what would be the effect of artificially suppressing the cutaneous excretion in animals. For this purpose he coated with glue, varnish, pitch, dextrine, &c., various animals, such as horses, dogs, rabbits, and fowls which had been previously shaven or plucked. The results varied with the impermeability of the coating and the extent of surface upon which it was applied; they also varied in kind, but they most commonly consisted in some modification of an internal secretion. Thus the mucous membranes were often the seat of an unusual discharge; in a horse, for example, whose skin was well covered by an adhesive preparation, a profuse running from the nose took place which had many of the characters of the secretion in glands. A similar flow occurred in sheep treated after the same manner, and their nasal mucous membrane examined after death presented the appearance of an intense inflammation; in rabbits and in dogs diarrhoea was established and the intestinal mucous membrane was found injected, thickened, and even softened, after death. In other cases the flux took place from certain serous membranes, as the pericardium and the pleura: in others again paraplegia was produced, or the subjects of the experiments dying of marasmus, tubercles were found in their lungs. If the coating occupied only a portion of the skin the animal died slowly, but if the cutaneous exhalation was completely suppressed death came on much more rapidly, and appeared to be the immediate result of asphyxia, for the subjects breathed rapidly and laboriously, and often perished in convulsions.

On dissection the veins, and the right side of the heart particularly, were found filled with dark, liquid, or imperfectly coagulated blood. When one-half only of either side of the animal was covered with an adhesive coating the cutaneous capillaries of that portion were gorged with dark and fluid blood, while those of the portion exposed to the air contained red blood, and in smaller quantity. These two regions were separated by a distinct line of demarcation. From these facts it is fair to conclude that one consequence of arresting the functions of the skin is the liquefaction of the blood. But M. Fourcault is by no means content with an inference which would still leave open the question,—what are the functions of the skin? He has satisfied himself by a series of experiments that the human skin and that of the mammalia do not eliminate carbonic acid, and, therefore, do not absorb oxygen enough to assist hæmatosis. Consequently the skin is, according to him, an excreting organ, and the effect of the impermeable coating used in his experiments, is merely to throw back into the circulation the effete liquid and gaseous elements which should have been eliminated from it. We shall presently see what he regards as these injurious agents.

In order to attach a more positive value to these results of experiment, our author very properly remarks that it is essential for him to show that man, like the lower animals, dies of asphyxia when an impervious coating is laid upon his skin, and he promises to bring forward proofs of this in a forthcoming work. Meanwhile his argument has but one leg to stand upon, or at least has an awkward limp. He cites, however, one instance in point which is certainly curious. At Florence, shortly after the coronation of Leo X, a child who was covered with gold leaf to represent the golden age which that pontiff was about to revive, fell a victim to this new philosophical experiment. M. Fourcault says that he has gilded, silvered,

and tinned the skins of several Guinea pigs, and that they all, like the Florentine child, died.

The influence of an impervious coating on the development of animal heat, is very remarkable. Breschet and M. Becquerel, in repeating M. Fourcault's experiments found that they were always accompanied by a singular loss of temperature in the subjects of them. Thus in a rabbit sheared pretty closely and well varnished, the temperature fell in the course of half an hour from 100° to 90° , and in half an hour more to about 78° . Another rabbit was very closely shaven, and the varnish applied to his skin allowed to dry for an hour and a half. At the end of that time the temperature of the animal's thighs was only a little more than 5° above that of the surrounding air, which was then 62° ; so that in the course of the experiment the rabbit had lost about 33° of heat. In another hour and a half it died. Similar results were obtained by M. Fourcault on exposing animals deprived of their fur or feathers to cold or moisture, or confining them in baths of oil or water, or covering them with a layer of tenacious clay. As the temperature of the animals fell, their strength declined, but even when their death seemed imminent they could be restored by allowing the air to have access to the skin, and by placing them in an atmosphere of about 80° or 90° of temperature. Rabbits, Guinea-pigs, cats, and birds, even ducks, where placed in baths of water or oil between 60° and 70° of temperature, but allowed to breathe and move freely in them. Yet they all died, although in a medium warmer by 35° than that in which during the winter season they preserved their natural temperature almost unimpaired. The baths of oil were less promptly fatal than those of water, but both rapidly so in proportion to the lowness of their temperature. This result our author attributes chiefly to the conducting power of the water, but partly also to the absorption of that fluid by the skin, which was proved as well by its being vomited during life, as by its being found in the body after death. On the other hand he observed that it was easier to restore animals exhausted by immersion in water than those which had been plunged in oil, for the former medium acting principally by lowering their temperature did not so effectually suppress transpiration as did the oil. In the victims of the oil-bath the same alterations of the blood and local lesions were observed as in the animals destroyed by an impervious coating upon the skin. Even frogs suspended in oil so as not to interfere with their breathing soon perish, while they live long, perhaps for an indefinite period, in water that has been deprived of its air by boiling. These experiments, our author regards as invalidating the commonly received opinions on the respiratory function of the skin of batracians. From a general review of the results of the experiments now detailed, it would appear that a complete interruption of communication between the skin and the atmosphere is attended with a liquefaction of the blood, and a depression of animal heat and vigour; and further that the contact of a cool liquid or of a moist and cool atmosphere rapidly lowers the temperature of an animal, and may increase unduly the proportion of water in the blood and other fluids. Consequently whatever grounds M. Fourcault may have derived from the first series of experiments (in which varnish, &c., were applied) to believe that death was caused by the repulsion of effete matters into the circulation, he can derive none whatever from the second series in support of the grand idea of his theory. We cannot conceive what possible application the results of the first series can have in ordinary medical practice, and least of all what light they throw on the etiology of scrofula and phthisis. There

is some analogy indeed between the admitted causes of these maladies and those to which the phenomena of the *second* series of experiments were due. Cold and moisture produce scrofula, &c., they also destroy animals under certain circumstances. Varnish upon the shaven skin of a rabbit may kill it by altering its blood; a coating of gold leaf, of mud, of paint, or any other adhesive substance may have the same effect upon a man. But, surely, it does not follow that cold and moisture directly modify the elementary composition of the blood: if any inference is permissible it is that they have no such effect. So far, then, we are obliged to conclude that M. Fourcault's experiments with impervious coatings afford no explanation whatever of the etiology of consumption and scrofula; and that his experiments with water and moist air instead of showing what he desired to prove, that these agents are injurious by repressing the perspiration, do, on the contrary, prove that they act chiefly by lowering the animal temperature.

M. Fourcault, however, is of quite a different opinion, and believing that he has demonstrated the dependence of many diseases upon the retention in the blood of matters that should have been excreted by the skin, at once suggests how easy it would now be to introduce into the circulation substances adapted to neutralize these poisonous agents. This is to be done not by the present clumsy apparatus for transfusion, but by another elegant and efficient one which our author does not describe. Here we have the old story of Sylvius and the Chemiatrists, with an improvement. Stupid as that system was, it formed no part of it to deny the propriety or the possibility of influencing the molecular composition of the body by means of medicines introduced into the stomach. But modern chemistry teaches us to better purpose. "What good," exclaims M. Fourcault, "can tonics, and stimuli, and antiphlogistics do in typhus and other diseases marked by a manifest alteration of the blood?" What good! what good have they not done? Are we to reject a remedy because we cannot discover its modus operandi? If so, how many should we have left in the *materia medica*? We thought the "essential platitude," as it has well been called, of professing to know how and why a remedy cures a disease had been abandoned by all who prefer practice to speculation in medicine, so that when a man like our author who has not youth and inexperience to allege as an excuse, gravely tells us that it is folly to treat a disease whose cause we know not with a medicine of whose action we are equally ignorant, we cannot help wondering whether his conscience is not troubled when he is forced to eat in order to cure that worst of diseases, hunger, without at all knowing whether his stomach contains lactic or muriatic acid, and whether or not those fluids are separated from the blood by "some modification of electricity" as Dr. Prout has it. We are far from blaming those who are labouring to discover the causes of disease and the action of remedies. If their researches are properly conducted they cannot fail of being eminently useful to science; but let them not presume to assert that the art of medicine must stand still until their investigations are completed, let them rather feel and know that when they have accomplished all which they propose to accomplish, when they have ascertained the apparent cause of every disorder, the action of every remedy, their results are still to be submitted to a final test, the *experimentum crucis*. It is still to be determined whether the avoidance of the alleged causes *will* prevent, whether the application of the alleged remedies *will* cure, disease. Except in this indirect manner the establishment of what are called "principles" in medicine had never saved a single life, nor alleviated a single pang. "Principles" of medical

science have never yet been, and cannot be, anything more or better than suggestions for a course of experiments in therapeutics.

But to return to the work before us. M. Fourcault observing that *albuminuria* very generally occurs in persons who have been exposed to the combined influences of cold, moisture, and a sedentary life, concluded that the disease must be owing to an interruption of the functions of the skin. He was in consequence led to examine the state of the urine in the animals which were the subjects of his experiments. Having prepared several dogs, as already described, he found that as soon as they gave evidence of suffering and their respiration became embarrassed, their urine, on being subjected to heat and nitric acid, was manifestly albuminous, and sometimes contained red blood globules. When a portion of the coating upon the dogs became detached, the urine ceased to be albuminous, and a deposit of salts took place in the vessel containing it. He also observed that the urine of these dogs which was acid at the commencement of the experiments, gradually lost its acidity, became neutral, and then alkaline, in proportion as the albumen in it grew more abundant. Somewhat analogous results were obtained with rabbits.

Wishing now to determine how far the skin itself is concerned in forming the elements of transpiration, and in producing animal heat, and albuminous urine, M. Fourcault flayed alive several rabbits and Guinea pigs, leaving the skin, however, *in situ*. He was much surprised to find that these martyrs to science lived two or three times as long as if they had been coated with varnish, and retained their natural temperature until about to die. In other cases he covered the raw surface of the body with a layer of dextrine and found that the animal temperature declined and albuminous urine appeared, precisely as when the impervious coating had been applied to the skin itself. Whence he concludes that this organ is not essential to the elimination of the perspiratory fluid, nor to the generation of heat and albuminuria. In other words he believes it proved that the elements of the perspiration being ready formed in the blood they are merely excreted by the skin, just as in the experiments of MM. Prevost and Dumas, in which the kidneys were extirpated and urea found in the blood, the kidneys are shown to be only excretory organs. Consequently, according to our author, albuminous urine does not depend on disease of the kidneys but on a suppression of the cutaneous exhalation. Now what must be the consequences of this suppression whether it is owing to an impervious coating, a sudden chill, the prolonged influence of cold and dampness, or an attack of fever? "It is clear," says M. Fourcault, "that the acid excretion of the skin can no longer escape, that immediately there is an excess of lactic acid in the blood which necessarily *disturbs the equilibrium of the organic affinities* of that fluid, seizes upon the albumen, and precipitates it in the urinary apparatus, where the soda holds it more or less completely in solution" . . . until it is revived by nitric acid or heat. What could be simpler or more ingenious? Here is the riddle read. Tubercle is a form of albumen; the fluid of dropsy is a form of albumen, so is the matter of elephantiasis, of phlegmasia dolens, &c. &c.; in each the albumen is coagulated by the lactic acid that cannot escape by the skin. And this terrible and pernicious acid is quite a new acquaintance, first introduced, and then unceremoniously turned adrift by Berzelius, now asserted to be a constant product of digestion, and now to be an evidence of diseased chymification; by one chemist admitted to exist in an extremely minute quantity amongst the saline constituents of the blood, themselves forming but an insignifi-

cant part of that fluid, and, finally, declared by another to have no existence at all in the blood of herbivorous animals. Yet M. Fourcault makes use of it in his hypothesis as if it were something quite as material and tangible as the red-globules or the fibrin of the blood. The old fashioned acrimony was quite as respectable an agent; it, to be sure, was created by the imagination, and lactic acid by the test-glass, but it answered the purpose quite as well. It made men fancy they understood the mysteries of nature, and, in like manner, our modern chemists bending over their retorts and reagents can see nothing in man or in the universe but atoms of matter and varieties of force. The error and the abuse are not more tolerable now than they were a hundred and fifty years ago. Even Boerhaave, celebrated, too, as the most eminent antagonist of the chemical school, furnishes us with a rationale of consumption almost identical with that of M. Fourcault. He, or rather his commentator, Van Swieten, tells us that persons having a predisposition to consumption are most subject to haemoptysis in cold and wet weather, which is "least favourable to free perspiration," and in which the "acrid particles which should be thrown off by perspiration begin to stop the pores." It were hard to tell which of the two doctrines is the most captivating, that which is purely and simply a fiction, or that which with a mighty pretension to material reality turns out to be an imposition. For our own parts we think there is vastly more relish in a thoroughly impossible fairy tale, than in the thousand "stories founded upon fact"—that is in which all the parts that strike the eye are false,—invented to soothe the conscience of this prudish and hypocritical age. If any one is willing to accept the lactic acid hypothesis, and to discern in it a satisfactory explanation of the manner in which cold, moisture, and repose induce disease, we shall not accuse him of credulity, but feel disposed rather to envy him the possession of a faith, which, if more generally diffused, would soon put an end to the harassing combats that now agitate the scientific world, and establish an infallible system of medicine, under which every man might practice with a quiet conscience, and a certainty of success.

These remarks will relieve us from the necessity of following M. Fourcault in his construction of a general theory of chronic diseases. The key which has now been furnished will enable any one to explain the generation of nearly all maladies as well as our author has done it himself. Given a little lactic acid and some albumen mixed in the human body, considered as a combination of furnaces, retorts, test-glasses, &c., to produce the required disease.

It must be a very easy matter, or else pathological chemistry plays us false. Nevertheless M. Fourcault, in discussing the etiology of several diseases, and while he insists very much upon their being caused by inaction, moisture, &c., and a consequent torpor of the skin, says not one word about lactic acid, but loses sight entirely of this intermediate link between evident remote causes and palpable effects. Thus he dwells very strongly on the imperfect action of the skin in many nervous diseases, particularly the melancholic forms of insanity, and on the good effects which result in these disorders from active muscular exercise, but gives no hint of any acid agency in the matter, nor even alludes to what might possibly have some symbolical meaning, the common belief that melancholy people have *sour* tempers. This omission clearly indicates that a theorist will sometimes abandon his hobby, moved by an instinctive love of simple truth, just as the counterfeit cripple, when unobserved, will fling aside his crutches and rejoice in his firm tread upon the ground.

It does not admit of a doubt that the state of the skin is unnatural in a number of chronic disorders, and M. Fourcault deserves credit for having pointed out this fact more clearly than has generally been done, as well as for having shown a probable connection between the state of the skin and the production of several secondary maladies, as, for example, that of consumption amongst the melancholic. But he assumes too frequently that the skin is the part first affected, whereas there can be no doubt at all that the starting point of the disease is often elsewhere, and most commonly in the digestive organs.

In a chapter on the fundamental principles and the epochs of medicine, M. Fourcault passes rapidly in review the different systems which have at various times prevailed. The external symptoms of disease are naturally the first to be studied by physicians; next in order the lesions of the organs attract attention; and finally the molecular alterations of the solids and fluids are investigated. When this much is accomplished it only remains to show the connection of symptoms with organic and molecular changes, and the science of medicine is complete. Opinions will probably differ in regard to how much has been actually achieved of this great work. M. Fourcault believes that nosology and pathological anatomy are scarcely susceptible of further improvement, and that the present age, by the aid of chemistry, the microscope, and comparative pathology will greatly advance if not consummate what remains to be effected. The failure of Van Helmont and Sylvius to bring about a permanent change of medical doctrines, he ascribes solely to the imperfection of their means of chemical analysis, and predicts for those who with better instruments for observation and experiment are following in their steps a certain, perhaps a speedy, triumph. It is in vain to object to our enthusiastic cultivators of chemistry, that the laws of life are not the laws of matter; this argument has been perpetually sounded in their ears, but they are deaf to it, or content themselves with replying that both laws may be modifications of some superior law, to the discovery of which their researches tend. An objection of more force is, we think, a practical one: let them tell us what disease has been rendered more curable by their investigations. To what purpose have we learned the proportions of oxygen, salts, &c., in the several solids and fluids? What matters it that chemistry shows us the necessity of avoiding certain kinds of food in renal disease, when experience has demonstrated that exactly the opposite sorts are most appropriate? In one department of the healing art, in toxicology, there is indeed some show of a claim for the usefulness of chemistry in medicine. It has discovered antidotes for several mineral poisons which are effectual only *in so far as the poisons have not acted* upon the living body. When once they have attacked a tissue, all antidotes are worthless. It would be very presumptuous to assert that analytical, destructive chemistry, may not yet contribute to improve the medical art, but until some earnest of its tendency to do this is produced, we would entreat physicians not to abandon the old paths in which disease is studied as it exists, and remedies are employed for their ultimate effects, in order to follow every ignis fatuus that emanates from the laboratory of even such a man as Berzelius or Liebig, in order to exhaust their energies in speculating on explanations, when their legitimate business is to observe and classify results.

Having settled to his own satisfaction not only the physical, but also, the chemical etiology of consumption, &c., M. Fourcault proceeds to apply his doctrine. He very properly lays no claim to being able to cure

phthisis and he blames physicians for not having long ago turned their attention to prevent the disease, seeing they were pretty unanimous in confessing their inability to remove it when once developed. Our author appears to think that he is the first who has made any approach to a rational view of the subject, whether in determining the classes of people most subject to scrofula, tubercle, &c., or in pointing out a thorough physical education, as the only prophylactic treatment deserving of confidence. Fifty years ago Dr. Beddoes published his "Essay on the causes, early signs, and prevention of pulmonary consumption," which, although written for parents and preceptors, and therefore deficient in scientific accuracy, goes over a great part of the same ground, and arrives at the same practical conclusions as M. Fourcault. In that essay he shows that certain classes enjoy an almost complete exemption from consumption, such as butchers, cat-gut makers, fish-women, sailors, watermen, stable-boys, grooms, gardeners, and small farmers, in a word all who take much exercise in the open air, and live on nutritious food. In the same essay, and in one of those of which his "Hygeia" is composed, he says, "that artisans whose occupations and habits are the opposite of those just mentioned, all, in short, who follow sedentary occupations in confined rooms, whatever be their habitual posture, are extremely liable to this fatal disease." In this class he enumerates tailors, weavers, spinners, glovers, dry grinders, flax-dressers, &c. In some of these cases, indeed, he attaches undue importance to the particles given off by steel, flax, &c., in their preparation, but is careful to admit that confinement alone is sufficient to engender consumption; to this end he refers to the great mortality amongst shoemakers from consumption, and to the frequency of this disease amongst stall-fed cows. He pointedly alludes to the influence of moisture on the health of the paper-makers of Rouen, and to that of suppressed perspiration on the mortality of the London gilders, of whom he is assured six-sevenths die of phthisis before their apprenticeship has expired. He is of opinion that consumptives consist of two classes, those whose occupation necessarily induces the disease without predisposition, and those who are predisposed to it and would have it under any circumstances that did not exert a powerful counteracting influence. There are some, however, who belong to both classes, such as the indolent and luxurious among the higher ranks of society, who have a hereditary tendency to phthisis; "upon these," says Dr. B., "the blight of consumption chiefly falls."

Having thus settled that an active life is the greatest safeguard against phthisis, Dr. Beddoes proceeds to describe the "phthisical temperament," and to lay down a plan for its correction. This latter consists in a system of physical training, which must "begin at the cradle," and be steadily pursued in after life. Bathing, friction of the skin, and nutritious food in children; digging, working with tools, walking, riding on horseback, athletic games, &c., for adolescents and adults, are the principal features of this system. All exercise without some other object than health Dr. B. considers as of very doubtful utility, and he therefore condemns the use of dumb-bells, walking against time, solitary gymnastics, &c., to which persons of feeble constitution are apt to resort in the delusive hope of being strengthened by them.

This sketch is sufficient to illustrate the close analogy between the works of the English and French authors. The latter, indeed, takes a more extended and minute view of his subject, and therefore furnishes a more definite history of the etiology of consumption, but his path, in so far as it

has led to a really useful conclusion, was clearly marked out by his accomplished predecessor, of whose writings he does not appear to know the existence. Nearly one-half of M. Fourcault's treatise is taken up in describing somewhat in detail a plan of physical education adapted to prevent the development of phthisis by giving vigour to the constitution during childhood and adolescence, but as it differs very little from that recommended by Sir James Clark, (*Cyc. of Pract. Med., Art. Tubercular Phthisis,*) and is encumbered with theoretical and irrelevant discussions, we shall not notice it further in this place.

After depicting in such a striking manner the dangers to health and life of many trades, we could not expect less from M. Fourcault, than that he should propose some method of removing, or at least diminishing these dangers, and accordingly we find him in a chapter on social hygiene, setting forth two remedies for one of the greatest evils of modern times. The first is that every poor child shall be taught two trades, one a more and the other a less laborious one! The second remedy is the establishment by private or public charity of manual labour schools, and agricultural colonies in neglected districts, to prevent centralization, and the increase of manufacturers at the expense of farmers! The people of the Old World are dying of suffocation while half of America remains almost uninhabited!

Our chief object in presenting this sketch of M. Fourcault's work is to direct the attention of physicians to the study of the means of preventing consumption. It is very evident that in this country, the causes which are so influential in producing it in the large towns of Europe, must be almost inoperative. We have no class of persons, even in our densest population, analogous to the lowest in the Old World; our artisans devote much less time to work than those of Europe, while they receive in general much higher wages, and are therefore much better able to provide themselves with the comforts of life. Nevertheless, phthisis stands at the head of the list of the causes of death, wherever any statistics of mortality have been published in this country. It would seem, therefore, as if the hereditary predisposition to the disease must be very strong amongst Americans, and that our best hope of staying its ravages must depend on our power of invigorating the constitution of the young. There is too much reason to fear, that this subject is neglected by the medical profession, because the greater number of its members regard their pursuit rather as a trade, or at best, an art, instead of feeling that it is not less their duty than their high prerogative, to guide public opinion in everything that relates to life, and health, without which life is a burden. It is time that physicians who have been fitted by their education, for understanding the importance of good health in its relations to all the interests of the commonwealth, should enlighten the ignorance of their less fortunate brethren, and that of the people at large. Under our institutions, the doctrine of political equality has been wrested from its legitimate applications, and interpreted to signify equality in everything, and especially equality in knowledge. Whoever would teach any truths which imply, however remotely, the ignorance of his auditors, or their feebleness of self-control, will soon find himself without listeners, even if he escape persecution. As we have no authorized teachers, none to whose doctrine any legal sanction is attached, we can only hope that some who are capable of instructing us, will volunteer their services; that some will be found to discover, or to proclaim, if already known, what are the pernicious habits to which we owe the prevalence of this deadly scourge, consumption, amongst us. To such we humbly submit the question

whether or not the radical vice of society is not the love of money, for itself merely and not for the enjoyments it is capable of procuring? Whether it is not this which ties up our children from the tenderest age in school, which chains them to the work-bench too closely, which condemns our whole population to a mere alternation between sordid money-getting labour, and ascetic and gloomy idleness; which for cheerful amusement substitutes gross debauch, which by depreciating all the higher and nobler faculties of the mind, values knowledge by its power of increasing animal comforts, and genius by the price its works will command. It cannot be that the moral nature of man should be so degraded, without injury to his physical condition. If there be any truth in these suggestions, it is possible that if they were illustrated and enforced as they should be, some good might at length accrue to the rising generation. Parents might be induced to devote more attention to the physical culture of their children, to develop and train their bodies and souls, as well as their understandings, and that not to the detriment of the latter, but to their eminent advantage. Now the faculties of the mind have a morbid prominence; they never cease their feverish action upon the one great subject, and thus by an inevitable law they exhaust the other faculties of man. But if the young were subjected to a discreet plan of physical education, and not so early emancipated from the wholesome restraints of home that they may be initiated in all the heartless tricks of the trading world, there is little doubt that we should at last see a race far superior to the present, not only in physical development and in exemption from slow disease, but also in those high moral qualities which dignify and bless mankind.

A. S.

ART. XIII.—*Urinary Deposits, their Diagnosis, Pathology and Therapeutic Indications.* By GOLDING BIRD, A. M., M. D., Assistant Physician to and Lecturer on Materia Medica at Guy's Hospital, &c. &c.—London: John Churchill, 1844. 12mo. pp. xxvi and 323.

FROM the earliest periods great importance was attached to the inspection of the urine in disease. The old treatises on medicine contain copious and minute details for its application to diagnosis and prognosis. The imperfections of chemistry and the absence of the microscope,—the indispensable handmaids to its successful prosecution,—together with the ascendancy of solidism, which ridiculed any investigation of the fluids, brought this once favourite method into disrepute, and it was finally abandoned to the professed charlatan, whose sole means of diagnosis it very frequently became. Since the recent impulsion to organic chemistry and the reintroduction of the microscope, a reaction has suddenly taken place, and the examination of the urine, as a means of diagnosis, again occupies an important place, and has been attended with practical results of great value.

The English chemists and pathologists were the first to again direct public attention to this interesting and pregnant subject, and to Maracet, Prout, Brodie, &c., the student of urinology owes a deep debt of gratitude. The French soon followed in their footsteps, and Rayer and his pupils added greatly to our stock of knowledge. The rapid advances in chemistry and micrography have led not only to the investigation of the physical qualities

of the urinary secretion, which were alone examined by the ancients, but to the discovery of the modifications which it undergoes, on the addition of certain reagents,* "a minute or two being sufficient for the observer to learn the nature of any variety of sediment."—(p. ix.) One of the best fruits of this "revival" in urinary pathology is the work of Dr. Golding Bird, which we are about introducing to the notice of our readers. "In coming in contact with pupils in the course of his duties as a teacher of the profession, and in mixing with medical men, in practice, he often found them in want of some work which would enable them readily to discover the nature of a deposit in the urine, and succinctly point out its pathological and therapeutical indications. To be available, it was necessary that such a work should not exceed the size of a small manual, and its contents be so arranged as to admit of ready reference; and thus be more fitted to act in the humble office of pioneer to more elaborate and more diffused sources of information."—(p. vii.) In 1843 Dr. Bird delivered a course of lectures on the diagnosis and pathology of urinary sediments. They were published in the London Medical Gazette, attracted much attention at the time, and were subsequently translated into German. These lectures form the groundwork of the present publication, though much extended and nearly rewritten.

The phenomena presented by the urine in disease, indicating as they do a series of pathological changes which are occurring in the system, rather than entities of morbid action themselves, constitute a most valuable index of disease, and the more so from the great facility by which they can now be detected. All topics unconnected with the practical bearing of the subject have been avoided in the present work, and everything of a controversial nature has been almost excluded. Whilst the diagnosis and pathology of urinary deposits have been very minutely entered into, their special treatment has received less consideration, having been handled so ably in the admirable works of Prout and Brodie. An exception has, however, been made in the instance of oxalate of lime, in consequence of the importance of the subject and the "scanty amount of information to be found elsewhere."

Chapter I. is devoted to the physiological origin and physical properties of the urine. Dr. Bird informs us *in limine* of his dissent from the ingenious and hypothetical views of Professor Liebig, a predicament shared, we suspect, with all who have had an opportunity of studying clinically the phenomena of disease, and have not been led astray by the brilliant and bold inductions of an ardent and fertile mind. Throughout the whole of this volume there is abundant evidence of the extreme caution of the author to admit the seductive theories which endeavour to explain vital phenomena by the physical or chemical laws that govern inert matter, and which in the present state of physiological knowledge can at most be regarded as provisionally correct. Physiologically considered the urine has three distinct sources. The free discharge of pale urine after copious aqueous pota-

* "It is not generally known," says Dr. Bird in a note at page ix, "that Van Swieten, the celebrated commentator on Boerhaave, applied the microscope nearly a century ago to the examination of calculous deposits; he minutely described an uric acid sediment as composed of crystals 'having the figure of a rhombus, whose opposite angles are obtuse and equal, other parallelopiped molecules ran between them, redder and larger than the former.' (Commentaries, 1776, Edinburgh, vol. xvi. page 81.) Even long prior to this, De Peiresc, born in 1580, described the same deposit as resembling under the microscope, a 'heap of rhomboidal bricks.' This observation is recorded by the celebrated Gassendi, in his biography of De Peiresc, and is quoted by Van Swieten."

tions, indicates that any excess of fluid in the circulation is got rid of in this manner. The kidneys, moreover, remove from the system any crude or indigested elements of food which had been absorbed, and excrete the noxious results of imperfect or unhealthy assimilation; as examples, we have the peculiar odour and colour of the urine after the ingestion of asparagus, &c., and the elimination of oxalic acid after a meal in cases of irritative dyspepsia. The third function performed by the kidney is the excretion of those disorganized tissues, which cannot be eliminated by the lungs or skin, and whose further sojourn in the economy would be noxious.

"It is therefore necessary to recognize three distinct varieties of the urinary secretion in every case under investigation: Firstly, that passed some little time after drinking freely of fluids, generally pale, and of low specific gravity, (1.003—1.009) *urina potus*. Secondly, that secreted after the digestion of a full meal, varying much in physical characters and of considerable density, (1.020—1.028 or even 1.030,) *urina chyli vel cibi*. Thirdly, that secreted from the blood independently of the immediate stimulus of food and drink, as that passed after a night's rest, *urina sanguinis*; this is usually of average density, (1.015—1.025), and presents in perfection the essential characters of urine."—(p. 4.)

Another highly important function of the kidneys is their ability to temporarily compensate for deficient action in other secreting organs. When the skin is imperspirable the renal function becomes notably increased. If the function of the liver be impaired, highly carbonized matters are excreted in the urine, the elements of the bile being separated from the blood incidentally by the kidneys, as is seen in every case of jaundice, or biliary obstruction. Excessive cutaneous action is generally balanced by diminished urinary secretion.

"In these and many other analogous modes the quantity and quality of the urine may become so modified as to lead to serious errors; and to induce a suspicion of the presence of renal disease where none really exists. The fact of an excessive or diminished secretion of urine existing in any particular case cannot *per se* be regarded as indicative of disease of the kidney, any more than the excessive sweating so frequent in rheumatism or phthisis, or the diminished perspiration in fever, can be regarded as implicating the existence of disease of the skin." (p. 13.)

In the investigation of the urine for the purposes of diagnosis, its physical and chemical properties should be studied, and, in some cases, its optical properties. Its physical properties are its *density or specific gravity*, its *colour*, and its *consistence*. Its *density* is discovered by means of the little instrument known as the *gravimeter* or *urinometer*, or if not at hand, by a small stoppered phial.

"For this purpose, counterpoise the empty bottle and stopper in a tolerably good balance, with shot or sand. Then fill it with distilled water, insert the stopper, and carefully ascertain the weight of the water it contains. Empty the bottle, fill it with urine, and again weigh it; the specific gravity of the fluid will be readily found by merely dividing the weight of the urine by that of the water.

"As an example, if a carefully counterpoised ounce phial, holds 478 grains of distilled water, and 498 of urine, the specific gravity of the latter will be 1.0418, for $\frac{498}{478} = 1.0418$."—(p. 14.)

It is often very important to ascertain the density of the urine, as we can thus determine the data necessary for the calculation of the proportion of solids excreted by the kidneys; and are thus enabled to detect an unsuspected cause of emaciation. To determine the proportion of solids in the urine, is absolutely necessary that the mean specific gravity of the urine,

for the past 24 hours, should be ascertained. To effect this "the patient should furnish specimens of the urine passed immediately before going to bed, (*urina chyli*), and of that voided on rising in the morning, (*urina sanguinis*.) The average density of these two specimens will give a near approach to the truth." Dr. Prout assigns 1.020 grains as the average specific gravity of healthy urine. The mean density of all the urine passed in 24 hours, and examined by Becquerel, was, in man 1.0189, and in woman 1.0151; the mean in the two sexes being 1.017. The average quantity of urine secreted in 24 hours varies, according to Dr. Prout, from 30 to 40 ounces; and according to our author, from 20 to 48 ounces, without exceeding the possible limits of health.

The *tints* of urine are diverse, "according to the degree of dilution, from nearly colourless, to the usual pale-amber colour, and up to deep-brown."

"When much diluted, urine presents a faint greenish tint, as in the urine of early infancy, and in that of chlorosis and hysteria. If bile or blood be present, a variety of colours varying from red to brown, blackish-green, or apple-green, are produced, the latter hue being occasionally indicative of the presence of cystine." (p. 23.)

The *consistence* of urine varies; it sometimes acquiring considerable viscosity.

"This is sometimes only to be detected by the readiness with which it froths on agitation, and the length of time the bubbles are retained, as in diabetes mellitus. In other cases the urine may be so viscid as to allow of being drawn into threads from the presence of mucus, although the latter generally forms a dense layer at the bottom of the vessel. The same thing occurs if pus is present in rather concentrated or alkaline urine, as the saline matters, or alkali present, react upon the albuminous constituents of the pus, and convert it into a mucous magma as pointed out by Dr. Babington and myself.

"The urine is occasionally, although rarely fluid, whilst warm, becoming semi-solid, like a mass of jelly, on cooling. This change depends upon the presence of self-coagulating albumen or fibrin, a state of things generally connected with severe organic mischief in the kidneys, although in some instances dependent only upon mere functional disturbance.

"In a few rare instances, occurring chiefly in urine loaded with oxalate of lime, I have found it quite fluid whilst cold and gelatinizing when heated, retaining, however, its transparency. This curious change is best observed when water is poured on the warm urine, when the gelatinous mass floats for some seconds in the water before it completely dissolves."—(p. 25.)

The optical properties of urine in their application to diagnosis are next treated of, but need not detain us, as in Dr. Bird's opinion, the application of the polarizing power of urine to the detection of sugar, is surrounded with too many practical difficulties, to admit of its being generally employed.

Chapter II. treats of the chemical physiology of the urine, and as involving much that is hypothetical, will be passed over by us.

So long as the different constituents of the urine maintain their proper relations, that fluid is clear, of a pale-amber colour, and has, on cooling, its transparency slightly affected by the gradual subsidence of a light mucous cloud, which sometimes precipitates a few microscopic crystals of uric acid. When these properties are disturbed, or a new element is added, the urine becomes turbid immediately on being voided, or else on cooling; so that all substances which affect the transparency of the urine by their presence, whether they subside to the bottom of the vessel, or not, are classed under the head of *urinary deposits*. Dr. Bird divides them into the four following classes.

"*Class 1.*—Deposits composed essentially of ingredients formed directly or indirectly from the metamorphosis of tissues, or from the organic elements of food.

Uric acid and urates.

Uric oxide.

Oxalate of lime.

Cystine.

"*Class 2.*—Deposits composed of ingredients of inorganic origin; including—

Phosphate of lime.

Ammonio-phosphate of magnesia.

Carbonate of lime.

Silicic acid.

"*Class 3.*—Highly-coloured deposits (black or blue) of doubtful origin. .

Cyanourine.

Melanourine.

Indigo.

Prussian blue.

"*Class 4.*—Deposits consisting of non-crystalline organic products; including—

A. Organized.

Blood.

Pus.

Mucus.

Organic globules.

Epithelium.

B. Non-organized.

Milk.

Fatty matter.

c. Possessing independent vitality.

Spermatozoa.

Torulae.

Vibriones."—(p. 59.)

Chapter III. is devoted to the consideration of the *Chemical Pathology of Uric Acid and its compounds*, and is highly interesting and instructive. Uncombined uric acid in urinary sediments always occurs in a crystalline form, and the crystals are often of sufficient size to be recognized without the aid of the microscope. It exhibits every colour, from pale fawn to orange red. When uric acid is in excess in the urine, its crystals are deposited on cooling, rarely before. The urine is generally of a deeper tint than naturally, reddens litmus paper, often contains an excess of urea, and is of increased density. Its diagnosis is thus pointed out.

"When heated in the urine, the uric acid deposit does not dissolve; the crystals merely become opaque. It generally becomes more distinct from the solution of urate of ammonia, which is frequently mixed with it, and sometimes completely conceals it from view. Hence the best mode of discovering this deposit, is to warm urine, turbid from excess of urate of ammonia in a watchglass; the acid becomes visible in the centre of the glass, as soon as the urate dissolves. Heated with liquor potassæ, the uric acid deposit dissolves, from the formation of an urate of potass of sparing solubility. Hydrochloric and ascetic acids are without any action, but the nitric readily dissolves it, and by careful evaporation a residue of a beautiful pink colour, becoming of a rich purple on being held over the vapour of ammonia, is left. This coloured residue is the murexid of Liebig, the purpurate of ammonia of Dr. Prout. Exposed to heat in a platinum spoon, the uric acid deposits burn, evolving an odour of bitter almonds; and finally leaves a small quantity of a white ash, which generally contains phosphate of soda or lime."—(p. 62.)

The microscopic characters are described very fully, and with great accuracy, and are accompanied with numerous woodcut illustrations.

The *urate of ammonia deposits*,—those of most common occurrence,—though varying in tint, present a number of characters in common. They

never appear whilst the urine is warm ; disappear immediately on the application of heat ; and are dissolved by the addition of liquor ammoniæ, or liquor potassæ. The following modifications are most important.

" 1st. A pale urine of low specific gravity (1.012), becoming opaque on cooling from the deposition of nearly white urate of ammonia, which, instead of readily falling, forms rope-like masses in the fluid, and presents on a superficial view so much the appearance of muco-pus, as to have been mistaken for it. Its disappearance on the application of heat at once will discover the error.

" 2d. A pale amber-coloured urine of moderate density (1.018), which on cooling lets fall a copious fawn-coloured deposit, resembling bath-brick grated into the urine, disappearing with the utmost readiness on applying a gentle heat. This deposit is of frequent occurrence, is often very transient, and is so constantly an attendant on the slightest interference with the cutaneous transpiration, that a 'cold' is popularly diagnosticated whenever this state of things exists.

" 3d. Whenever febrile excitement prevails, the urine becomes concentrated, rises in density (1.025), and deposits on cooling a reddish-brown sediment, constituting the well-known lateritious, or brick-dust sediment. This variety of urine generally becomes turbid on the addition of a drop of nitric acid, not from the coagulation of albumen, as has been frequently erroneously supposed, but from the precipitation of uric acid. This is always in minute microscopic crystals, notwithstanding the amorphous appearance it presents to the naked eye.

" 4th. In well-marked affections of the portal circulation, especially when connected with organic disease of the liver or spleen, or when suppuration, particularly of a strumous character, is going on in the body, the urine is generally found to possess in many instances a deep purple or copper colour, often verging on crimson, so as to have led to the idea of blood being present. These deep tints appear to me to depend upon the presence of an excess of purpurine. Whenever a deposit of urate of ammonia occurs in such urine, either spontaneously or by immersing it in a freezing mixture, it combines with the pink pigment, forming a kind of lake, and which is often so abundant as not to entirely disappear by heat, until the urine is diluted by the addition of water. These deposits do not exhibit their delicate tints until after being collected in a filter; they readily give up their colouring matter to alcohol, which leaves their urate of ammonia nearly unchanged."—(p. 70.)

The sources of uric acid are the disintegration of the tissues, and nitrogenized food. Whenever the former process is hastened, or the assimilation of the latter impeded, the amount of uric acid in the urine will be affected. In acute inflammatory affections, if the kidneys perform their functions, the quantity of uric acid will be found above the healthy average. If the functions of the skin are interfered with, an excess of nitrogen will be retained in the blood, and finally separated in the form of urate of ammonia, or perhaps urea, the kidneys assuming for the time a compensatory action. That nitrogenized products are exhaled from the skin is proved by the following fact, quoted by Dr. Bird.

" Dr. Faraday calcined pure river sand, and on heating it with hydrate of potass, it yielded no trace of ammonia. On merely passing this sand over his hand, and then treating it in a similar manner, ammonia was evolved. A piece of ignited asbestos, by mere pressure for a short time between the fingers, absorbed enough of some nitrogenized organic matter to evolve ammonia when heated with hydrated potass."—(p. 77.)

Liebig's theory of one of the principal causes of an excess of uric acid, is fully examined, and ably combated by reference to clinical observation. Regarding the different forms of uric acid gravel as mere indications of certain pathological conditions, Dr. Bird discards altogether the existence of any specific agent in its treatment. As a common consequence of an arrest of perspiration, a prominent therapeutic indication is, attention to

the condition of the cutaneous surface, whose function should be excited by diaphoretics, frictions, warm clothing, the use of flannel, and in winter, even a chamois leather waistcoat. Dr. Bird's own experience induces him "to regard the warm, or still better, the vapour bath, as the most valuable diaphoretic"—(p. 91). The organs of digestion must be attended to, and this part of the treatment must be adapted to the peculiarities of the individual case. In general small doses of blue mass, or mercury and chalk, associated with extract of conium, and moderate doses of the carbonates of potassa or soda in the compound infusion of gentian, if there be constipation, or in infusion of columbo, or what is still better, from its diaphoretic tendencies, serpentaria, will produce great relief. If there be gastrodynia, Dr. Bird recommends a half of a grain of the oxyde or nitrate of silver, immediately before a meal; this will often check alike the gastric and renal symptoms. In regard to diet we have the following most sensible remarks, which cannot be too highly prized just at this time.

"But the most important element in the treatment is a rigid attention to the quality and quantity of the ingesta, taking the utmost care to select those articles of diet which the patient can best digest, *it being of far greater importance, in the majority of cases, to regard this, than to choose articles of food according to their chemical composition.* A too bulky meal of animal or vegetable food is injurious to persons labouring under calculous dyspepsia, for whilst the former supplies too much nitrogen, both will become sources of mischief by overloading the digestive functions, and preventing the chylopoietic viscera doing their duty. In protracted cases, however, much good is derived by actually cutting off part of the supply of nitrogen. In this way I have seen a copious deposit of uric acid gravel disappear, after other measures had failed to give relief."—(p. 92.)

Moderate exercise is essential in the treatment of this disease. Where the food is not easily or well assimilated, iron is recommended.

"I have repeatedly seen," says Dr. Bird, "copious deposits of uric acid in persons of low power completely disappear *pari passu* with the cure of the pseudo-chlorotic symptoms present, by the use of this important drug. The best mode of administering it, is in combination with a vegetable acid, as the stomach bears it well in this form, and it is probably more likely to enter the circulation. From six to twelve grains of the ammonio-citrate or ammonio-tartrate of iron taken thrice a day immediately after a meal in a glass of water, have been most successful."—(p. 95.)

In speaking of those remedies which act as solvents of uric acid, Dr. Bird suggests the employment of the phosphate of soda, Liebig having lately called attention to its remarkable solvent action on uric acid.

"All that is required to ensure this drug reaching the urine is to administer it in solution sufficiently diluted; $\frac{3}{4}$ to $\frac{5}{6}$ ss might be administered in any vehicle, as in broth or gruel, as when diluted; the phosphate tastes like common salt, and few persons object to its flavour. I have administered this drug in two very chronic cases of uric acid gravel, and in one with the effect of rapidly causing a disappearance of the deposit."—(p. 98.)

From the recent observations of Mr. Alexander Ure, it appears that when benzoic acid, or its salts, are taken into the stomach, instead of becoming oxidized, it is converted into hippuric acid, from its great affinity with those nitrogenized elements which otherwise would have formed urea or uric acid. When an excess of uric acid exists, experience shows that their administration limits it to its normal proportion. Though solvent remedies are not, according to our author, to be despised, they must still be regarded as mere palliatives, "and we must never lose sight of the great importance of endeavouring to remove that pathological state of the whole

system, or of any particular organ which may be the exciting cause of the calculous formation. Nothing but a careful investigation of symptoms can put us in possession of the knowledge necessary for this purpose"—(p. 100-1).

In connection with urate of ammonia, with which it is commonly combined, we have the subject of Chapter V., *Purpurine*. This peculiar colouring matter has been regarded by some as identical with purpureate of ammonia, the murexid of Liebig; but Dr. Bird agrees with those who consider the pigment as a substance *sui generis*.

"When a deposit of urate of ammonia is coloured by this substance, it presents a tint varying from the palest flesh-colour to the deepest carmine. To appreciate the beauty of these tints the deposit should be collected on a filter, and allowed to dry. The presence of purpurine interferes with the ready solubility of the deposit with which it is combined, on the application of heat, and free dilution with water is often required to aid its solution. I have never seen purpurine colouring any other deposits except those of urate of ammonia; even uric acid scarcely appears to have any affinity for it. It is just possible that a very highly coloured deposit of pink urate of ammonia might be mistaken for blood, and I have seen this error committed when it occurred in albuminous urine. The appearance of the deposit when collected on a filter, and its giving up the purpurine to alcohol, will at once remove any doubt on the subject, and the absence of blood-disks on microscopic examination will aid in demonstrating the real nature of the deposit."—(p. 107.)

Its important pathological indications are thus described.

"The presence of an excess of purpurine is almost invariably connected with some functional or organic mischief of the liver, spleen, or some other organ connected with the portal circulation. The appearance of a flesh-coloured deposit in the urine is the commonest accompaniment of even slight derangement of the hepatic function, as every case of dyspepsia occurring in gin-drinkers points out. The intensity of colour of the deposit appears to be nearly in relation with the magnitude of the existing disease. In the malignantly diseased, in the contracted, hobnail, or cirrhosed liver, the pink deposits are almost constantly present in the urine. They also are of frequent occurrence in the hypertrophy of the spleen following ague. The most beautifully coloured deposits I have seen have occurred in ascites connected with organic disease of the liver; and I think I have received some assistance in the diagnosis between dropsy depending upon hepatic and peritoneal disease, in the presence of the pink deposits in the former, and their general absence in the latter. I have occasionally seen the deposits in question occur in phthisis, when large quantities of pus were poured out from vomicæ, as well as in deep-seated suppuration, as in psoas abscess. But even in these cases, the portal circulation is probably more or less influenced. My experience, indeed, leads me to express a firm belief that an excess of purpurine is almost pathognomonic of disease in the organs in which portal blood circulates."—(p. 109.)

The next chapter is on the *Chemical Pathology of Cystine*, and is very complete, but as its occurrence in urinary deposits is very rare, it need not detain us. It is connected with the secondary assimilative process, and is characterized by an excessive elimination of sulphur; every ounce of this substance containing two drachms of sulphur. It is associated with the scrofulous diathesis, and is probably hereditary. The therapeutical indications are yet but imperfectly understood.

The fullest and most valuable chapter in the work, is that in which the *Oxalate of Lime deposits*, or *Oxaluria* is treated of, and which are much more frequent than commonly supposed. The importance of the subject, and the neglect with which it has been treated by previous urinary pathologists, induce us to present a pretty full analysis of the results of Dr. Bird's interest-

ing inquiries. The general belief in the extreme rarity of the oxalate of lime in a crystalline form in urinary deposits, is accounted for from the fact of its rarely or never subsiding, so as to form a distinct deposit; remaining for days diffused through the liquid, even when present in so large a quantity, that each drop of the urine, when placed under the microscope, is found loaded with the crystals. Another reason for its escaping the eye, is due to its refractive power approaching that of urine. The result of Dr. Bird's extensive researches is the discovery of the comparative frequency of well-defined octahedral crystals of the oxalate of lime in urine, and of the connection between the occurrence of this substance and the existence of certain definite ailments, all characterized by great nervous irritability. The depressing influences of large and densely populated cities, as a cause of the formation of this salt, is suggested, and Dr. B. has no hesitation in declaring, from his own enlarged experience, that, so far as London is concerned, the oxalate of lime is of far more frequent occurrence in urine, than the deposits of earthy phosphates.

When examined under a magnifying glass, the most common form of the crystals of oxalate of lime are beautifully formed transparent octahedra, with sharply defined edges and angles. Occasionally the oxalate resembles a series of minute cubes, adhering together like blood-discs, but with a higher power these are readily resolvable into octahedra. When the oxalate is dried on a plate of glass, on microscopic examination each crystal presents the curious appearance of two concentric cubes, with their angles and sides opposed, the inner one transparent, and the outer black, so that each resembles a translucent cube set in a black frame. In a very few cases the oxalate is met with in very remarkable crystals, shaped like dumb-bells, or rather like two kidneys with their concavities opposed, and sometimes so closely approximating as to appear circular, the surface being finely striated. Dr. Bird has remarked as an almost constant phenomenon in oxalic urine, the presence of a very large quantity of epithelial scales; and a white deposit of epithelium has often attracted his attention, and led him to suspect the existence of oxalate of lime.

The pathological origin of the oxalate of lime is a question of high interest. The physiological relation existing between sugar and oxalic acid, and the diabetic characters which are present when this sediment occurs, would lead to the idea that the source of oxalate of lime in the urine was sugar. In no instance has Dr. Bird found sugar in oxalic urine, nor oxalate of lime in diabetic urine. What then is the source of oxalic urine? The constant coincidence of serious functional derangement of the stomach, duodenum, and liver, shows that the primary cause must be referred to the digestive and assimilative functions. When it is recollect that an excess of urea, and often of uric acid, in most instances accompanies the oxalic deposit; and when the remarkable chemical relation existing between urea, uric acid, and oxalic acid, and the ready conversion of the former into the latter, under the influence of oxidizing agents, as satisfactorily shown by Wöhler and Liebig, is borne in mind, may not the disease under consideration be regarded as a form of *azoturia* (of which an excess of urea is the prevalent indication), in which the vital chemistry of the kidney has converted part of the urea, or of the elements which would in health have formed this substance, into oxalic acid? This view is supported by the history, symptoms, and progress of the cases, an increased deposit of uric acid being among the first indications of amendment.

The symptoms accompanying the secretion of oxalic acid are thus described.

"As a general rule, persons affected with the disease under consideration are generally remarkably depressed in spirits, and their melancholy aspect has often enabled me to suspect the presence of oxalic acid in the urine. I have seldom witnessed the lurid greenish hue of the surface to which Dr. Prout has referred. They are generally much emaciated, excepting in slight cases, extremely nervous, and painfully susceptible to external impressions, often hypochondriacal to an extreme degree, and in the majority of cases labour under the impression that they are about to fall victims to consumption. They complain bitterly of incapability of exerting themselves, the slightest exertion bringing on fatigue. In temper they are irritable and excitable; and in men the sexual power is generally deficient, and often absent. A severe and constant pain, or sense of weight, across the loins, is generally a prominent symptom. The mental faculties are generally but slightly affected, loss of memory being sometimes more or less present. Well-marked dyspeptic feelings are always complained of. Indeed, in most of the cases in which I have been consulted, I have been generally told that the patient was ailing, losing flesh, health, and spirits, daily; or remaining persistently ill and weak, without any definite or demonstrable cause. In a few the patients have been suspected to be phthisical. It is, however, remarkable that I have yet met with very few cases in which phthisis was present. In three cases I have seen the cases terminate in the formation of a calculus."—(p. 140.)

The exciting causes of the secretion of oxalic urine are generally well-marked, and

"In nearly all, the predisposing cause was nearly the same, viz.: a chronic and persistent derangement of the general health, or the result of previous acute disease, dyspepsia, injury to the constitution by syphilis and mercury, by child-bearing and over-lactation, by venereal excesses or intemperance. The exciting cause has generally consisted in some circumstance which has determined the irritation to the urinary organs. Of these, exposure of the lower part of the spine to cold; mechanical violence inflicted over the kidneys; unnatural excitement of the genital organs, as shown by the frequent occurrence of involuntary seminal emissions or irritation from passing a bougie; have most generally constituted at least the most evident exciting causes. In many cases, however, no other obvious cause existed than great mental anxiety, produced by excessive devotion to business or study."—(p. 142.)

The treatment is represented as usually successful, a few cases only resisting. We give it in Dr. Bird's own words.

"As a general rule, the functions of the body, where obviously imperfect, should be corrected, the general health attended to by the removal of all unnaturally exciting or depressing influences, the skin should be protected from sudden alternations of temperature by a flannel or woolen covering, and the diet carefully regulated. This has generally consisted of well-cooked digestible food, obtained in about equal proportions from the animal and vegetable kingdom; all things which tend to produce flatulence being carefully avoided. The drink should consist of water, or some bland fluid, beer and wine being excluded, especially the former, unless the patient's depression render such positively necessary. A very small quantity of brandy in a glass of water has generally appeared to be the most congenial beverage at the meals. The administration of nitric acid, as suggested by Dr. Prout; or what appeared to be preferable, the nitro-hydrochloric acid, in small doses, in some bitter infusion; or laxative mixture, as the *mistura gentianæ comp.*, was with minute doses of mercury, generally successful, if continued a sufficient length of time. In cases where these failed, active tonics, especially the sulphate of zinc, and where the patient was anaemic or chlorotic, the salts of iron in very large doses, appeared to be of great use, by subduing the irritable state of the nervous system. The shower-bath, by acting in a similar manner, has been also of great service. There is one remedy which appears to exercise a marked influence over the characters of the urine, and which, from the small

amount of experience I have had with it, seems to hold out the probability of its great utility in the disease under consideration: I allude to the colchicum, which, it is now generally admitted, exerts an immense influence over the organic system of nerves, and the functions under its control. The character of the urine is remarkably influenced by this drug, an excess of uric acid generally being present during its administration; and in two cases, in which oxalate of lime existed in abundance before its employment, uric acid appeared after a few days as a deposit, and nearly entirely replaced the oxalate; a circumstance generally observed during the successful treatment of this disease by other remedies. In no case have I seen the disease suddenly yield; it has generally slowly disappeared *pari passu* with the decrease in number and size of the crystals of the oxalate."—(p. 142.)

In illustration a number of cases are appended.

In Chapter VIII. the chemical pathology of the *earthy salts* is fully and ably discussed. The deposits of these salts are always white, unless coloured with blood; soluble in dilute hydrochloric acid, and insoluble in ammonia and liquor potassæ. When heated they undergo no change, except agglomerating into little masses; their occurrence is to be regarded as of serious importance, indicating great functional, and, frequently, serious organic mischief. Our author says,

"One general law appears to govern the pathological development of these deposits, viz.: that they always exist simultaneously with a depressed state of nervous energy, often general, rarely more local, in its seat. Of the former, the result of wear and tear of body and mind in old people, and of the latter the effects of local injury to the spine, will serve as examples. It is true, that in the majority of these cases there is much irritability present, there is often an excited pulse, a tongue white on the surface and red at the margin and tip, with a dry, often imperspirable, occasionally hot skin. Still it is irritability with depression, a kind of erythema of the nervous system, if the expression be permitted, like that observed after considerable losses of blood. The pathological state of the system accompanying the appearance of deposits of phosphate of lime, are analogous to those occurring with the triple salt; indeed, as has been already observed, they often, and in alkaline urine always, occur simultaneously. So far as my own experience has extended, when the deposit has consisted chiefly of the calcareous salt, the patients have appeared to present more marked evidence of exhaustion, and of the previous existence of some drain on the nervous system, than when the triple salt alone existed."—(p. 176.)

Deposits of the triple salt often occur in feeble old people, and in such cases the urine is usually very fetid. They have also been observed in persons after acute diseases, in the commencement of convalescence. Hence the presence of this salt must be regarded as indicative of irritability with exhaustion.

"When the deposit is copious, either readily falling to the bottom of the vessel, or remaining suspended in the urine like mucus, the two phosphates are generally found mixed. In these cases an alkaline condition of the urine almost invariably occurs, a piece of turmeric paper being readily stained brown on being immersed in it. The odour also is very disagreeable, and is generally said to be ammoniacal, although in very many instances the term fetid would be more appropriate, as ammonia is by no means necessarily evolved. This kind of urine, if not depending upon organic disease of the urinary apparatus, is always connected with some serious affection of the spinal marrow. In a mild form this is observed after slight violence inflicted on the spine or over the region of the kidneys, and generally disappears in a few days. I have seen a copious deposit of phosphates with alkaline urine occur for a few days in the case of a young gentleman who had exerted himself too much in a riding-school. The fact of alkaline urine resulting from strains or blows on the back was first noticed by Dr. Prout, and injuries to the loins have been long enumerated among the existing causes of renal calculi. This alkaline state of the urine and deposition of phosphate, is a pretty constant

result of anything which depresses the nervous energy of the spinal marrow, whether the result of insidious disease of the spine, or the effect of sudden mechanical violence. Further, as observed by Sir B. Brodie, this condition of the urine, whenever it follows spinal injuries, appears not to be connected with the particular locality of the injury, but to occur equally in accidents to the lumbar, dorsal, or cervical regions."—(p. 181.)

In the treatment of these deposits the different pathological conditions should be borne in mind. As an accompaniment of severe irritative dyspepsia they are by no means uncommon.

"Every now and then cases occur in practice in which the most prominent symptoms are a capricious appetite, sense of weight and fullness at the praecordia, especially after meals, irregular bowels, severe lancinating pains darting between the scapulæ from the pit of the stomach; much flatulence, tongue white, often with injected marginal papillæ; pulse quick and irritable, dull heavy aching pain across the loins, excessive depression of spirits, despondency so intense as often to excite the most painful ideas. In a merchant surrounded by affluence, visions of impending beggary often embitter the moments that are free from the excitement of business; in a mechanic, unfounded ideas of immediate loss of employ, and the interior of a workhouse, are generally present. On examining the urine, its specific gravity is often above the average; the deposition of crystalline or amorphous phosphates, and often excess of urea, will refer the case to its proper class, as one of irritative dyspepsia, in which the excess of phosphates indicates the 'drain' on the nervous energies. The treatment of these cases must be rather directed by general principles, than limited to the solution of the phosphatic deposits. It is true that by the persistent administration of acids the deposit may disappear for a time, but the ailment goes on; all that is effected by such treatment is to mask a symptom, and an important one, of the progress of the malady. After having attended to the morale of the case, as far as possible rousing the patient from any morbid influence excited in his mind, whether real or imaginary, the next thing is to attend to the general health. The bowels should be freed from any unhealthy accumulation by a mild mercurial laxative, as a few grains of pil. hydrarg., followed by a dose of rhubarb or castor-oil; but all active purging should be avoided, as it generally aggravates the distress of the patient, and decidedly interferes with the success of the treatment. A combination of a tonic laxative with a sedative may then be administered, as tinct. hyoscyami et sp. ammon. aromaticæ $\frac{1}{2}$ ss. ex mist. gentianæ co. $\frac{3}{4}$ j. ter in die. If the bowels be irritable, the inf. cascarillæ, or inf. serpentariae, may be substituted for the mist. gentianæ comp. Should gastrodynia exist, great relief will be obtained by the administration of half a grain of oxide of silver, made into a pill with confection of opium, before a meal. The diet should be very carefully regulated, all bland nutritious articles of food being preferred; vegetables should be avoided, and in general a small quantity of good sherry may be allowed. By a plan of treatment of this kind, the patients generally do well, and the phosphates and excess of urea vanish from the urine. As the patient approaches convalescence, much good is often effected by the use of sulphate of zinc in gradually increasing doses, beginning with a grain thrice a day, made into a pill with a little ext. hyoscyami, or ext. gentianæ, and increasing the quantity every three or four days, until five grains or more are taken at a dose. Under the use of the zinc, I have seen many cases do well, whose symptoms approached in severity and character those of mild delirium tremens. I need hardly say that change of scene and occupation are important adjuvants to our medical treatment."—(p. 192.)

When the amount of nervous irritability is excessive, and emaciation progressive and rapid, the treatment is more difficult. This condition generally follows some injury to the spine. Such patients are seldom hypochondriacal, but are painfully excitable, and an unhappy, anxious expression of countenance and manner, is almost invariably present. The first object here must be to reduce the irritable state of the nervous system.

Good diet, and the exhibition of silver, bismuth, and zinc, and above all, of opium, so highly extolled by Dr. Prout, are of the highest value.

Our limits oblige us to pass over much that is interesting, and which would, no doubt, prove highly instructive to many of our readers. Dr. Bird believes, that the greasy aspect of the pellicle in the so-called *Kiesstein*,—the peculiar mucilaginous principle so constantly present in the urine of pregnant women—does not arise from the presence of fat, but from numerous crystals of triple phosphate, though some fatty matter is undoubtedly present. The section which treats of the urine of pregnancy is rich in facts and information.

The following tests for the detection of *saccharine urine* are given as the most trustworthy.

“1. *Trommer’s test*.—Add to the suspected urine in a large test-tube just enough of a solution of sulphate of copper, to communicate a faint blue tint. A slight deposit of phosphate of copper generally falls. Liquor potassæ must then be added in great excess; a precipitate of hydrated oxide of copper first falls, which redissolves in the excess of alkali, if sugar be present; forming a blue solution like ammoniuret of copper. On gently heating the mixture to ebullition, a deposit of red suboxide of copper falls if sugar be present.

“2. *Capezzuoli’s test*.—Add a few grains of blue hydrated oxide of copper to urine contained in a conical glass vessel, and render the whole alkaline by the addition of liquor potassæ. If sugar be present, the fluid assumes a reddish colour, and in a few hours the edge of the deposit of oxide assumes a yellow colour which gradually extends through the mass, from the reduction of the oxide to a metallic state (suboxide?).

“3. *Moore’s test*.—This very easily applied test was lately proposed by Mr. Moore, of the Queen’s Hospital, Birmingham, and depends for its action on the conversion of colourless diabetic (grape) sugar into brown melassic (or perhaps sacchulmic) acid under the influence of a caustic alkali. Place in a test-tube about two drachms of the suspected urine, and add nearly half its bulk of liquor potassæ. Heat the whole over a spirit-lamp, and allow actual ebullition to continue for a minute or two; the previously pale urine will become of an orange-brown, or even bistre-tint, according to the proportion of sugar present. This test appears to be remarkably free from sources of fallacy, as boiling with liquor potassæ rather tends to bleach non-saccharine urine than to deepen its colour.”—(p. 278.)

The work concludes with an admirable chapter on the “therapeutical employment of remedies in influencing the functions of the kidneys,” in which an attempt is made to lay down certain general laws for the administration of diuretics, by which we may secure the effect of this very capricious class of medicines. Dr. Bird assumes, that besides absorption by the lymphatics, fluids can find their way into the capillaries by direct imbibition, and that living membrane, quoad imbibition and exudation, is obedient to the same physical laws as if it were removed from the body; a doctrine in strict accordance with the best physiological notions. The researches of Wöhler have demonstrated that the function of the kidneys is limited to the excretion of substances in solution. “Bodies, therefore, intended to reach the kidneys, must, to ensure their absorption, have their solutions so diluted as to be of considerably lower density than either the liquor sanguinis, or serum of the blood (i. e., below 1.028.”) (p. 284). A strong solution of the acetate, or tartrate of potassa, escapes altogether the absorbents, and actually excites an exudation of water from the exhalants by its irritation of the stomach and small intestines; whilst, if administered in diluted solution, it will produce diuresis. This is a fact of the utmost importance in the treatment of uric acid deposits by saline remedies, and applies to the majority

of salts of alkalies and of magnesia. These laws obtain only when the entrance of water to the capillaries of the intestines is unobstructed, and when no obstacle materially interferes with the "transit of the water with the blood from the intestinal capillaries to the vena-porta, thence through the liver to the ascending cava, through the lungs and heart to the aorta, and finally to the emulgent arteries." When impediment exists to this current of the blood, as in narrowing of the auriculo-ventricular openings of the heart, or in cirrhosed liver, the kidneys excrete but little, and dropsical effusions occur, which are in fact vicarious. In such cases the administration of direct diuretics will produce congestion of the kidneys, but will not increase the secretion of urine, because the fluid elements are prevented from reaching them. Here, hydragogue cathartics, by acting on the intestines, remove the effusion. Dr. Barlow, of Guy's Hospital, was the first to call attention to these conditions, and

"He has, moreover, announced the very interesting fact, that whenever a stricture or other obstruction exists in the course of the small intestines, sufficient to prevent fluids readily passing along them, the urine will be diminished in bulk in the direct ratio of the proximity of the obstruction to the pylorus; nearly absolute suppression of urine occurring when the stricture is so high up as to allow but a small quantity of the fluid contents of the intestines to be exposed to the absorbing influence of the portal capillaries. So absolutely does this obtain, that the observation of the bulk of urine excreted has been proposed by Dr. Barlow as a means of diagnosticating the seat of obstructions in case of insuperable constipation." (p. 289.)

In further illustration of these views, whose important practical bearing will be readily appreciated, we shall give in conclusion, the following remarks by Dr. Bird.

"I think, then, that the so-called capricious effects of most diuretics, or the entrance of any remedy into the renal circulation, may all be explained by one or other of the foregoing laws, and that the supposed uncertainty attending their action is in most instances to be traced rather to a want of discrimination on the part of the practitioner, than to any fault in the remedy. An example or two of this kind will be sufficient. Bitartrate of potass is regarded as a diuretic; if a drachm of it be administered with a little fluid, or in confection, it irritates the intestines, produces fluid motions, and the kidneys are scarcely affected. Let the same quantity of the drug be dissolved in water and then given; it is imbibed by the capillaries, and causes an increased excretion of water by the kidneys, in accordance with the first law. Sufficient examples of the second law have been given already. Of the third we have an excellent illustration in the action of mercury and other cholitic drugs, in 'directing,' as it has been termed, the action of a diuretic. Thus let us suppose we are called to a patient in whom a sluggish state of the portal circulation exists, the liver being congested or myristicated, and from some dropsical effusion, or other symptoms, we are anxious to stimulate the action of the kidneys. It is notorious that in these cases the acetate of potass, nitric ether, squill, and other active diuretics, may be prescribed in vain; but as soon as moderately frequently repeated small doses of pil. hydrargyri, or hydrarg. c. creta, or even aloetic remedies have been administered, and the liver disgorged of its contents by a free secretion of bile, the kidneys begin to act as the almost necessary result of a readier circulation of portal blood. Perhaps there is no diuretic so valuable in dropsy connected with contracted liver, as a combination of the squill with a little blue-pill. Many remedies regarded as diuretic, probably really act in this manner; thus colchicum appears to influence the secretion of urine by its stimulating the mucous membrane of the duodenum, and thus by irritating the orifice of the common choledic duct, produces an increased secretion of bile and pancreatic juice, and indirectly removing a loaded state of liver. Taraxacum, a deservedly esteemed cholagogue, owes its diuretic action in all probability to a

similar cause. Aloes in small doses, and some other remedies, may be referred to this category.

"Again, in heart-disease, especially when a contracted mitral orifice, or dilatation of the whole organ exists, and dropsy results, the exhibition of stimulant diuretics is nearly valueless. Here, the guarded employment of the infusion of digitalis, by soothing the irritability of the heart, and calming the irregular circulation, virtually diminishes the congested state of the vascular system, and acts indirectly as an excellent and efficient diuretic.

"From the above observations, the following practical conclusions may be drawn:—

1. "Whenever it is desirable to impregnate the urine with a salt, or to excite diuresis by a saline combination, it must be exhibited in solution, so diluted as to contain less than five per cent. of the remedy, or not more than about twenty-five grains in an ordinary draught. The absorption of the drug into the capillaries will be ensured by a copious draught of water, or any diluent, immediately after each dose.

2. "When the urine contains purpurine, or other evidence of portal obstruction exists, the diuretics or other remedies employed should be preceded or accompanied by the administration of mild mercurials,—taraxacum, hydrochlorate of ammonia, or other cholitic remedies. By these means, or by local depletion, the portal vessels will be unloaded, and a free passage obtained to the general circulation.

3. "In cases of valvular or other obstructions existing in the heart and large vessels, it is next to useless to endeavour to excite diuretic action, or appeal to the kidneys by remedies intended to be excreted by them. The best diuretics here will be found in whatever tends to diminish the congested state of the vascular system, and to moderate the action of the heart; as digitalis, colchicum, and other sedatives, with mild mercurials." (p. 290.)

From the space which we have given to the consideration of this little volume, our readers will naturally infer the exalted opinion we entertain of it. Yet we fear we have still conveyed a very inadequate notion of its merits. Where almost everything is of value, it is difficult to select or condense. Such of our readers as wish to increase their store of practical knowledge, and enlarge the sphere of their usefulness, we refer to the volume itself, and recommend its possession. We now take leave of Dr. Bird with an expression of great readiness to meet him again in the same, or some analogous line of investigation.

M. C.

BIBLIOGRAPHICAL NOTICES.

ART. XIV.—*Fifth Annual Report of the Registrar-General, of the Births, Deaths and Marriages in England.* London, 1843: 324 pages: folio.

WE have noticed at considerable length, the previous reports of the Registrar-General, and enriched our pages with the valuable facts which they present.* The one now before us shows an increased attention devoted to the acquisition of information relating to the conditions and changes taking place in the dense population of England. The tabular statements, of which the large folio volume is chiefly made up, exhibits in minute detail, the marriages, births and deaths, not only for the metropolis and large towns, but in the various rural districts in England and Wales. The causes of death are severally stated, and comparative views presented which add great interest to the statistical labours of George Graham, Esq., the Registrar-General, and others employed under him.

In the previous reports, the abstracts of the causes of death were not made up at the close of each year, but extended to the 30th of June. The disadvantages of this arrangement being recognized, the plan of adhering to the ordinary year has been adopted. As the census was taken nearly in the middle of 1841, the marriages, births, deaths, and causes of death, are all made up for that year.

In the fourth report it was stated that the population of England increased in the 10 years, 1831–1841, at the rate of 1.334 per cent. annually, and that, in comparing the marriages, births and deaths, of each year with the population, it had always been assumed that the rate of increase was uniform.

The marriages in 1841 were 1 in 130; the births, 1 in 31; the deaths, 1 in 46 of the population. The average of the two preceding years had been, of marriages, 1 in 127; births, 1 in 31; deaths, 1 in 45. The rate per cent. of the marriages, births and deaths, in 1841, compared with the population, would stand thus in decimals: 0.769 marriages, 3.217 births, and 2.160 deaths occurred to 100 living; or without decimals: 769 marriages, 3217 births, and 2160 deaths, to every 100,000 of the population.

In regard to the marriages, a slight diminution is obvious in every year. In the 11 divisions in which the kingdom has been arranged, in order to exhibit the proportion of marriages, the fluctuation in some was too slight to merit attention; but in others, the variations coincide with the depression or prosperity of industry or trade, indicating the view which the people took of their own circumstances, and the greater or less immediate facility of making provision for the support of families. The marriages in the Welsh division show a progressive decline. The most remarkable decrease is in Monmouthshire, where the total marriages in the three years 1839—1841, were 1403, 1308, and 1119.

The greatest number of marriages (36,502) take place in autumn, and the smallest number (25,174) in winter. The difference between the extremes is 11,368; and the four seasons stand in the following order:—

	Winter.	Summer.	Spring.	Autumn.
January,	July,	April,	October,	
February,	August,	May,	November,	
March,	September,	June,	December,	
Average (1839–41)	25,174	29,502	31,558	36,542

"The marriages in winter (25,174) are to those in spring (31,559) very nearly as the marriages in summer (29,502) are to the marriages in autumn (36,542): and the marriages in winter are to those in summer, as the marriages in spring to the marriages in autumn. The marriages in the four quarters are therefore the

* See American Journal of Med. Sci. for January and July, 1841, and Oct., 1842, and Jan., 1844.

terms of a proportion; and the marriages in any three quarters being given, the number of marriages in the other quarter can be deduced from them within a few hundreds either by the common rule of three, or as the terms are nearly equidifferences, by adding two terms and subtracting the third. The regularity in the numbers registered in each of the three years indicates the operation of constant causes, or such as fluctuate only in the same way as those which adjust the proportion of marriages to the population.

"Lent and Christmas have probably some influence in fixing the time of marriage, and in causing the difference of 11,368 marriages in the March and December quarters. But the December quarter follows the season of the agricultural labourer's greatest earnings, when wages are highest and the stores of winter are laid up; whilst at the close of winter labour is scarce, wages fall, and the accumulations of autumn are nearly exhausted.

"If the physical condition of the people have any influence, we might expect this to be most manifest where the earnings of the majority of the population are derived from agriculture; which is found to be generally the fact. In the manufacturing counties, where the wages of the operatives are not much influenced by the seasons, the excess of marriages in autumn is considerable, whilst in the metropolis the excess of marriages is in the summer quarter, at the close of the London season."

The number of persons married who signed the registers with marks remains the same; 33 in 100 of the men, and 49 in 100 of the women married in 1841, did not sign their names. In some parts of the country, 51 in 100 men, in others, 71 in 100 women did not write their names. This last instance, representing the extreme of the illiterate scale, occurred in North Wales. The Registrar-General expresses his regret—and well he may—at being unable to report any improvement on this head.

Births.—A comparison of the births to the deaths registered in 1841, is as 512,158 to 343,847, or 149 to 100. *Three births*, therefore, are registered to every two deaths.

The increase in the births was greatest in the northern division and in the metropolis. The greatest number of births is registered in the winter quarter; the smallest number in summer.

Illegitimate births.—It is not stated distinctly in the registers of births whether children are or are not born in wedlock; but as various circumstances on the face of the register infer the fact, the Registrar-General was enabled to have the illegitimate and legitimate births in the last two quarters of 1841, carefully abstracted. "Of 248,554 children registered," he observes, "15,389 were illegitimate: so 1 in 16 children born in England is not born in wedlock. This is a much higher proportion of illegitimate births than has been generally given; but the numbers are not exaggerated; for if any doubt arose in making the abstracts, and the matter appeared dubious, the child was invariably set down as legitimate. If again there are any defects in the registration of births, it is not probable that illegitimate children will be entered in undue numbers; so that I can discover no grounds for supposing that less than 64 in 1000 English children are illegitimate. The proportion in France is 71 in 1000.

"I showed in the Fourth Annual Report that the proportion of boys to girls born in England was 10,486 to 10,000. The mathematical questions connected with the proportion of the sexes born have been investigated by Laplace, Poisson, Babbage, and other distinguished philosophers; and one of the results which has attracted most attention and created most speculation is, that the proportion of boys is greatest among legitimate children. In France, for instance, the boys are to the girls born as 106·4 to 100·0; but among illegitimate children the proportion is 104·4 to 100·0. The present return gives a result exactly the reverse; of the legitimate births the boys are to the girls as 105·4 to 100·0; of illegitimate births the boys are 108·0 to 100·0; and, small as the numbers are, the ratio differs little in the two quarters. It is, I believe, assumed in the French Returns that foundling children are illegitimate. If it be true, as is stated by those acquainted with the matter, that many of the children sent to the foundling hospitals in France are the offspring of married people, who probably abandon a greater proportion of girls than boys, it will follow (1°) that the proportion of children born out of wedlock

is nearly the same in England as in France; and (2^o) that the inference from the Returns of Continental States having foundling hospitals as to the relative predominance of females among natural children is fallacious. I abstain, however, from any further comments; and shall add nothing respecting the relative numbers of illegitimate children in different districts, until more extensive abstracts shall have been made."

Deaths.—The total number of deaths reported to the Registrar-General, was 355,655, for the year ending June 30th, 1841. For the year ending Dec. 30th, 1841, the amount was 343,847.

Effects of the seasons.—The deaths were more numerous (99,069) in the winter of 1841, than in the winter of any preceding year, but in the spring the decline commenced, which reduced the mortality in the following quarters below the mean mortality of the 4 years. Up to the year 1840, the deaths in the summer quarter rose regularly from 72,791 to 80,822; in the autumn from 80,833 to 89,630. The deaths in winter did not fluctuate except in 1839, when they were below the average number. If the quarters had contained the same number of days, and the population had been stationary, the deaths would have been nearly as follows:

" Four Winters (365½ days)	391,059	Quarterly average (91½ days)	97,765
Four Springs	356,565	"	89,141
Four Summers	302,827	"	75,707
Four Autumns	334,556	"	83,639
Mean - - -	346,252	Mean - - -	86,563

"If the mortality were uniformly at the same rate as in winter, 391,059 deaths would happen annually; if at the same rate as in summer, 302,827 deaths would be registered. This exhibits in a striking light the fatal effects of cold; and also of the crowding and privations to which a considerable part of the population is necessarily more exposed in cold than in warm weather.

"The average corrected number of deaths in the seasons would be—

Winter.	Spring.	Summer.	Autumn.
97,765	89,141	75,707	83,639

By transposing the autumn and summer terms, the law is discovered which has regulated the mortality of the seasons, thus—

Winter.	Spring.	Autumn.	Summer.
97,765 : 89,141 :: 83,639 : 75,707			
Differences 8,624	5,502	7,932	

"The terms are in proportion; the product of the two extremes is nearly equal to the product of the middle terms, or the deaths in winter are to the deaths in spring as the deaths in autumn to those in summer. The proportion is perceived when no correction has been made in the quarterly deaths registered.

Winter.	Spring.	Autumn.	Summer.
96,441 : 88,812 :: 84,666 : 76,333			
Differences 7,629	4,146	8,333	

"Admitting that this law should continue to prevail, as the proportion is also nearly arithmetical, a very close approximation to the average number of deaths in the whole year may be deduced either from the deaths registered in spring and autumn, or in summer and winter; thus the average annual deaths in the 4 years, 1838–41, was 346,352; the deaths in spring and autumn were 173,478; and twice that number gives 346,956, only 704 above the yearly average; while the deaths in winter and summer, multiplied by 2, give 345,548, or 704 below the annual average."

To exhibit the order in which marriages, births, and deaths take place more evidently, a summary view is subjoined of the series of facts, which appear to be governed by the influence of the seasons, according to the same law of proportion.

Relative number (corrected for inequality of time) of marriages, births, and deaths, in the seasons of the year—

	Autumn.	Spring.	Summer.	Winter.
Marriages	36,306	31,355	29,634	25,482
	Winter.	Spring.	Autumn.	Summer.
Births	131,257	129,677	121,053	120,356
	Winter.	Spring.	Autumn.	Summer.
Deaths	97,765	89,141	83,639	75,707

"The seasons have most influence on the number of marriages; least on the number of births. If 100 be taken to represent the lowest average number registered in a quarter, the births rise to 108, the marriages to 142, the deaths to 129. According to the abstracts down to the present time, the births and deaths are most numerous in winter, marriages in autumn; whilst the smallest number of births and deaths occur in summer, of marriages in winter."

"It has been frequently observed that the marriages and births are most numerous where the mortality is highest; and this doctrine is borne out by the facts in a table where the mortality is raised 44 per cent. in the extreme division (Lancashire and Cheshire), the marriages and births are raised 21 per cent.; whilst a comparison of the five most unhealthy and the five most healthy divisions exhibits the same fluctuation, though to a less remarkable extent. The marriages and births are 12 per cent. higher in the five divisions where the mortality is raised 15 per cent.; and the excess of 12 per cent. in the births furnishes a number of births more than equal to the increase of deaths."

The mean temperature of the several months of the year, deduced from the observations at the apartments of the Royal Society, Somerset House, London, stand as follows:—

MONTHS.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1841	36½°	37°	49°	50°	60°	61°	62°	64°	59½°	52°	45°	43°
1831 to 1840,												
Average of 10 years.	38°	40½°	42°	47°	55°	62°	65°	64°	58°	52°	44½°	41°

Mr. Farr, to whose able statistical labours we have heretofore had occasion to refer, has furnished a table which must prove of the highest value to those interested in Life Insurances and Life Annuities.

In regard to this *table of mortality*, or as it has been sometimes called, *table of vitality* or *life table*, the Registrar-General has made the following observations, which, as the work is scarcely attainable in this country, and the matter of exceeding interest, we extract at some length.

"The life table was invented in England by Halley, the illustrious astronomer, who 'first ventured to predict the return of a comet which appeared accordingly in 1759.' By this simple and elegant table the mean duration of human life, uncertain as it appears to be, and as it is with reference to individuals, can be determined with the greatest accuracy in nations, or in still smaller communities. I refer to the form, and not to the mode of construction, which has been since greatly improved.

"Halley's table was calculated on the deaths in the city of Breslau, which, for various reasons, he selected from the imperfect data at his disposal 'as the most proper for a standard, and the rather for that the births did a small matter exceed the funerals.' He was aware that 'he wanted the number of the whole people' for an accurate calculation; Halley's table, constructed upon nearly the same hypothesis as the Northampton table, represented the mortality of mankind with as little inaccuracy, and was upon the whole quite as good a 'standard.' He observes, 'it may be objected that the different salubrity of places does hinder the proposal from being universal, nor can it be denied,' 'but,' he concludes, 'it is desired that in imitation hereof the curious in other cities would attempt something of the same nature, *than which nothing perhaps can be more useful.*' The

table, which gave 'a more just idea of the state and condition of mankind than anything then extant, had manifold uses, showing among other things the chances of mortality at all ages, and likewise how to make a certain estimate of the value of annuities for lives, which had been previously done by an imaginary valuation.'

"The government of the revolution, it will be recollectcd, introduced the system of borrowing money upon life annuities, and after having failed to procure subscriptions upon the terms of the act of 1691, succeeded in making good the deficiency by granting life annuities in the following year at 14 per cent. Halley, referring to the measure in his paper, remarks that his calculation shows 'the great advantage of putting money into the present fund lately granted to their majesties giving 14 per cent. per annum, or at the rate of 7 years' purchase for a life, when young lives at the usual rate of interest are worth above 13 years' purchase.' In the ignorance then prevailing as to the duration of life, annuities were granted at the same rate to persons of every age; and Halley pointed out 'the advantage of young lives over those in years, a life of 10 years being almost worth 13½ years' purchase, whereas one of 36 is worth but 11.'*

"Tables of the lives of French annuitants, monks and nuns, were published by Deparcieux in 1746; and in 1783 Dr. Price constructed a correct table from the population and deaths in Sweden and Finland. This was the first national life table ever constructed, and redounds much more to Dr. Price's fame than the Northampton table of mortality—so called—which, founded upon the misapplication of an hypothesis, never represented the mortality of Northampton or of any other community, and ought not to have been published after the appearance of the admirable essay and tables of Deparcieux in 1746.†

"The Carlisle table was calculated by Mr. Milne, on two enumerations made by Dr. Heysham of the population of Carlisle and its environs, in 1779 and 1787, with the deaths in 9 years. The mean population was 8177, and the deaths 1840. Mr. Milne has described, in his treatise,‡ the care with which the observations were taken, and the method employed in the construction of this justly celebrated table, which was the first correct representation of the vitality of any portion of the English population.

"Although the *data* necessary for determining the law of mortality among the people, and the value of pecuniary interests dependent upon the continuance or failure of human life cannot be obtained,' observed Mr. Milne, in 1831, 'without the active concurrence of many persons of influence and authority, yet for all the tables containing information of that kind relative to this country, and published before the year 1829, the public were indebted to the zeal and industry, and the separate efforts of a few individuals. But in March, 1819, Mr. Finlaison was appointed by government, with all the aids they could afford him, including proper assistants, and access to the registers of the nominees in tontines, and others on whose lives annuities had been granted by government for more than a hundred years before, in which registers the exact ages at which the annuitants were nominated, and those at which they died, were stated. Thus the *data* not otherwise accessible being provided, and the labour lessened by the number of calculators employed, the expense also being defrayed by the public, at the end of 10 years, *viz.*, in March, 1829, Mr. Finlaison made a report to the lords of the treasury, which was printed by order of the House of Commons, and in tables filling 50 folio pages, shows the rates of mortality and the values of annuities on single lives at all ages, among many different classes of annuitants, both separate and combined, the sexes being generally distinguished both in exhibiting the law of mortality and the value of annuities.§'

* An estimate of the mortality of mankind, drawn from various tables of the births and funerals in the city of Breslau, with an attempt to ascertain the price of annuities upon lives, by Mr. E. Halley, *Transactions of Royal Society, London*, vol. xvii., 1693, p. 596, No. 196.

† *Essai sur les Probabilités de la Durée de la Vie Humaine*, 1746.

‡ Milne on Annuities, 1815. See also two articles by Mr. Milne in *Encyclopedia Britannica*, "Annuities," and "Mortality."

§ "Annuities," *Encyclopedia Britannica*, 1831, p. 208.

"The Equitable Assurance Society published in 1834 a valuable abstract of the accumulated facts in their possession, from which Mr. Morgan deduced a table of mortality. The excellent example of the Equitable Society was followed by the Amicable Society. The Societies' abstracts distinguished the persons who entered at each year of age, a point which, it is to be regretted, was neglected in Mr. Finlaison's tables, although the granting of annuities calculated on the lives of persons, sick or healthy—to selected persons in health, particularly at advanced ages, is well known to be, and has since proved, a matter of serious importance in a pecuniary point of view.

"At the suggestion of Dr. Cleland, the civic authorities of Glasgow, with a laudable zeal, enumerated the ages of the population of that city in 1831; and the registration of deaths was so complete, that Mr. Milne was enabled to construct a table of mortality, which he expects to publish, from the observations made in the 10 years, 1820–30. I am not aware that any other set of observations has appeared from which a true life table can be constructed. I have already stated that Sweden is the only *nation* for which tables of this kind have been constructed upon correct principles. France has no accurate life table,* nor have the *data* from which a life table can be constructed, namely, the ages of the living and the dying, ever been published. No life tables have been constructed for the population of Prussia or Austria; but the *data* exist, and have to a certain extent been published, though in forms which present considerable obstacles to the calculation. The census of Prussia, in which the ages are distinguished, is taken every three years; and periodical abstracts of the deaths have been carefully made by Mr. Hoffman. The ages of the living are, however, unfortunately divided in an irregular manner, entirely different from the correct divisions adopted by Mr. Hoffman in the returns of deaths; which renders it impossible, without a preparatory interpolation, to compare the deaths with the living at the several given ages. The same objection applies to the forms of the Austrian returns, which I have had an opportunity of seeing. Registers of deaths are kept by the clergy of the Russian empire; but I am not aware that life tables have been framed for any portion of the Russian population. The census has been taken decennially with great regularity in the United States of America, and the ages are properly distinguished; but abstracts of the registers of deaths have only been published by the cities of New York, Philadelphia, Boston, and some of the more advanced towns, where property has accumulated, and life is watched over with more care or facility than in the back settlements—scantly peopled, with a fluctuating population. No correct life table can therefore be formed for the population of America, until they adopt, in addition to the census, the system of registration which exists in European states."

Since an English life table has now been framed from the necessary data, I venture to express a hope that the facts may be collected and abstracted from which life tables for other nations can be constructed. A comparison of the duration of successive generations in England, France, Prussia, Austria, Russia, America, and other states, would throw much light on the physical condition of the respective populations, and suggest to scientific and benevolent individuals in every country—and to the government—many ways of diminishing the sufferings, and of ameliorating the health and condition of the people; for the longer life of a nation denotes more than it does in an individual—a happier life—a life more exempt from sickness and infirmity—a life of greater energy and industry, of greater experience and wisdom. By these comparisons a noble national emulation might be excited: and rival nations would read of sickness diminished, deformity banished, life saved—of victories over death and the grave—with as much enthu-

* Duvillard states that his table, which is used by French life offices, and is given every year in the *Annuaire de France*, was founded on 100,542 deaths, at different ages, in different parts of France, among a population of 2,920,672. He has said very little about the *data*. The mean duration of life in France, according to Duvillard's table, is only 28·76 years. The duration of life is, I believe, longer in England than in any other country; but it is scarcely credible that the lives of Frenchmen should be 12 years shorter than the lives of Englishmen, and 10 years shorter than the lives of Swedes. The table probably involves the same errors as the Northampton table.

siasm as of victories over each other's armies in the field; and the triumph of one would not be the humiliation of the other; for in this contention none could lose territory, or honour, or blood, but all would gain strength.

"In the years 1840-1 a million children (1,014,461) were born in England, and their births were registered; if the mortality should remain the same, the life table will enable us to follow this million, and determine how many will be alive and how many will die, through the several years of the next century, until they have all "returned to the earth from which they came," and been replaced by other generations destined to pursue the same rounds of life. To bring the observation within narrower limits, let us take 100,000 as the basis of the observation; and from the proportion of the two sexes registered, it will be found that 51,274 of them were boys, 48,726 girls. And here it will be recollect that they are not government annuitants—nor persons who have assured their lives—nor selected lives—nor the inhabitants of any particular town—but the children of all ranks and classes of Englishmen; some of them born in halls and palaces, and surrounded by all the luxuries and conveniences of life; others born in huts on the mountain-side, in the cellars of ill-constructed cities, in lodging-houses, in cottages, farm-houses, or such dwellings as our towns afford. Let it be assumed (and I shall shortly show what reliance can be placed on the latter part of the hypothesis), that the 100,000 were all born on the same day—the 1st of January, 1841; and that the survivors, counted on the first day of 1842, 1843, and of every year for the next 100 years, will exist in the numbers against the respective ages of a table, which I shall call the English life table.

"Of the 100,000 children born, according to the supposition, on January 1st, 1841, only 85,369 were alive on January 1st, 1842. They were exactly a year old, and are placed against the age '1' of the table. 14,631 perished in the first year, the fourth part of them in the first month of life. This is a smaller proportion of deaths than people have been led to suppose occur in the first year; but the facts leave it undoubted that this number of children survived in 1841 out of 100,000 born. On January 1, 1843, the survivors were two years old, and in number 80,102; 5267 died in the second year. On January 1, 1846, the 5th year of age will be attained, and there will be 74,201 living. In the first five years, therefore, 25,799 of the 100,000 children born die; during this period, when they are at home and under the care of the mother, and encounter the contagious diseases which beset the beginning of life, their safety depends very much upon the power of the parents to supply them with food and raiment—upon the mothers' watchfulness and cleanliness—upon the air they are doomed to respire in imprisoned courts and alleys—or in the fresh open atmosphere of healthy country districts. During the next five years, when they leave home more, and when as it appears from the parliamentary returns, great numbers pass part of the day at school, the mortality becomes less considerable; 70,612 are alive at the age of 10; and from 10 to 15, when those 'who labour with their hands' begin to follow the plough—enter the factory—or descend the mine—the loss of life remains small; 68,627 will live to the age of 15. At this age the loss of life among girls is greater than the loss of life among boys, and it continues so for the next five years, when both sexes are more detached from the care of their parents, and the majority pursue the professions or trades by which they afterwards gain a livelihood. The mortality appears to increase rather rapidly from 12 to 15; and then at a slow regular rate from 15 to 55 years: 66,059 attain the age of 20. It was observed that 51,274 boys were born alive to 48,726 girls; but the mortality in infancy is greater among boys than girls; so that 31,958 males attain the age of twenty-five, and 31,623 females attain the age of twenty-four. This is about the average age of marriage in England; and the number of the two sexes is then nearly equal. About four-fifths of the males who attain the age of manhood marry; the proportion of women who marry being the same. It might have been supposed that the peculiar danger which women encounter at this age enhances their mortality; it does so, but less than the mortality of males is increased; 50,301 of the 100,000 persons born attain the age of forty-five; namely, 25,311 men, and 24,990 women. The chance of living from 25 to 45 is rather in favour of English women. The violent deaths of men on rivers, and the sea-coast, in mines, in the streets, in traveling, in their dangerous occupations; the mental agitations and anxieties, terminating

unhappily sometimes in suicide—the accumulation of workmen in ill-ventilated shops, or the hard exhausting work of the agricultural labourer, independently of war, and service in unhealthy climates, counterbalance the dangers and sorrows of child-bearing. At the age of 55, this generation will have given birth to, and brought up the generation by which it is to be succeeded; a more rapid rate of mortality will then set in, and more than a thousand die every year; yet 37,996 will be alive at the age of 60, and 24,531 attain the age of 70—11,823 men, and 12,708 women—the mortality of women being less than that of men after 55. The mental faculties, ripened and developed by experience, will not protect the frame from the accelerated and insidious progress of decay; the toil of the labourer, the wear and tear of the artizan, the exhausting passions, the struggles and strains of intellect, and more than all these, the natural falling off of vitality, will reduce the numbers to 9398 by the age of eighty. Here we may pause for a moment. It would formerly have been considered a rash prediction in a matter so uncertain as human life to pretend to assert that 9000 of the children born in 1841 would be alive in 1921; such an announcement would have been received with as much incredulity as Halley's prediction of the return of a comet, after the lapse of 77 years. What knew Halley of the vast realms of ether in which that comet disappeared? Upon what grounds did he dare to expect its reappearance from the distant regions of the heavens? Halley believed in the constancy of the laws of nature; hence he ventured from an observation of parts of the comet's course to calculate the time in which the whole would be described; and it will shortly be proved that the experience of a century has verified quite as remarkable predictions of the duration of human generations; so that, although we little know the labours, the privations, the happiness or misery, the calms or tempests, which are prepared for the next generation of Englishmen, we entertain little doubt that about 9000 of 100,000 of them will be found alive at the distant census in 1921. After the age of 80 the observations grow uncertain; but if we admit their accuracy, 1140 will attain the age of 90; 16 will be centenarians; and of the 100,000, one man and one woman—like the lingering barks of an innumerable convoy—will reach their distant haven in 105 years, and die in 1945.

Crescunt optatae auræ, purtusque patescit
Jam propior—

"Without entering into the mathematical details of the question, the nature of the calculation will be readily comprehended. It may have been ascertained that of 100,000 children born in January, 1841, 80,102 were alive in January, 1843; but we could not, of course, if we were so disposed, know by *direct means* how many will live through the year and see 1844: it was, however, ascertained at the census that there were 437,276 children living in 1841 of the age of 2 and under 3 years; and the deaths of 15,027 children of the same age were registered. Hence as 15,270 died to 437,276 living, it is a mere matter of arithmetic to determine how many die and how many survive a year out of 80,102 children exactly 2 years old. According to the table 2710 die out of 80,102, and 77,392 attain the third birth-day, and will be alive on January 1, 1844. The mortality at certain intervals of age can always be determined from a comparison of the numbers living with the deaths: and from the ascertained mortality the annual survivors can be calculated. Thus, in 1841 it was found that 6633 men died at the age 20–25 out of 724,013 living; the mean age of those persons may be taken to be 22½ years; we know the mortality, therefore, at that age, and can tell how many of a given number, say 32,792, aged 22, will live a year—how many of the 100,000 alive on January 1, 1863, will be alive on January 1, 1864. By repeating this calculation at every quinquennial period of life, it becomes evident that the force of mortality is regulated by a law, and may be expressed by regular curves, which can be derived from, and enable us to correct the observations, where they are known to be erroneous from misstatements of age. Experience and the conformity of the observations with this law are the grounds of our confidence in life tables.

"A life table shows, out of a given number born alive, the numbers living at every year of age for 100 or 105 years. The assumed number born alive, technically called the *base* or *radix* of the table, is arbitrary; and the age at which the

table terminates varies in different tables. The yearly deaths are called the ‘*decrements of life*.’ In its present form, the life table possesses several remarkable properties. It shows the *probability or chance of living a year or any number of years at any age*. Thus at birth the chance of living a year is .85369, the chance of dying .14631; for there are 100,000 chances, and 85,369 in favour of living. At the age of 40 the chance of living a year is $\frac{53,134}{53,825}$, for according to the table the number who die in the next year is 691, and the number who survive is 53,134; so it is 53,134 to 691 that a person aged 40 will live a year. At 60 the chance of living a year is $\frac{36,874}{37,996}$; the denominator of the fraction (37,996) expressing the total number of chances, and the numerator (36,874) the chances in favour of living. The chance of dying is $\frac{1,122}{37,996}$, and the two fractions added together $\frac{36,874+1,122}{37,996} = \frac{37,996}{37,996} = 1$: unity being in the arithmetic of probabilities the symbol of certainty, the certainty that the person will die or live, is thus expressed.

“The probable duration of life—the *vie probable* of the French—is seen at once by inspecting the table; it is the time in which the number born is reduced one-half; in the English table, 45½ years. It is probable, or in Halley’s words, ‘an even wager’ that a child will live 45½ years; for the 100,000 are reduced to 50,301—nearly half their number—by the age 45; there is, therefore, nearly an equal number of chances (50,000) in favour of living to and of dying before the age 45½. The *probable* life of a boy is 44, of a girl 47 years. How long is it probable that a woman aged 25 will live? The ‘living’ against 25 in the table is 31,337, the half of which is 15,668, a number attained at the age 66; 41 years therefore is the *probable* duration of her life. What is the ‘probable life’ of a man at the age of 60? The number against the age is 18,808; and the half of 18,808 is 9,404, to which the 18,808 are reduced at the age 73; at 60 therefore it is *probable* that a man will live 13 years.

“Suppose that it were desired to ascertain the influence of factory labour, or any other employment—of residence in a school or in a city; the first point to be determined would be the average probability of life according to the English life table; say that the children enter at 10 years of age, then, as in the table 70,612 is against the age 10, and 68,627 against the age 15, the average probability of living five years is $\frac{68,627}{70,612}$, and the degree in which this probability is diminished or increased measures exactly the influence of the circumstances in which the children are placed.

“Upon adding up the column of ‘living’ the sum of the numbers will be found to amount to 4,165,890; subtract half 100,000 from this, and 4,115,890, the number of the years which the 100,000 persons live, will be obtained. Divide the years of life 4,115,890, by 100,000, and the quotient, 41·16, will be the mean age. This is called the *expectation of life*—*vie moyenne* of Deparcieux; for males it is 40 years, females 42 years, and for both sexes 41 years. By repeating the process the expectation of life at each year of age is obtained; at five years it is 50 years; at ten 47; at twenty 40; at thirty 34; at forty 27; at fifty 21; at sixty 14, &c., &c. The average age at which persons aged 30 will die is 64 years, and 74 is the average age at which sexagenarians will die.

“The *expectation of life* in the annexed table was calculated separately for males, females, and ‘persons;’ and as the expectation of life in the first column will generally be found a mean of the expectations in the other two columns, it is a check on the separate calculations. At birth the expectation of females’ lives is more by two years than that of males; at 20 it is 40·81 years, that of males being 39·88 years; at 50 the expectation of females is 21·07, that of males 20·02; during the whole period of life after the first year the difference in the expectations does not exceed 1·17 year. This difference is important; but the table dispenses of the highly exaggerated opinions as to the superior vitality of the female sex derived from partial observations. I am informed that the lives of females assured are not

longer than those of males; which might have been expected, as at assurance offices their state of health is less strictly investigated.

"The life table is easily converted into a population table, showing the total numbers living, and the numbers living at every age. Thus the number of the years of life 4,115,890, would be the population maintained by 100,000 annual births, if the mean duration of life were 41.1589 years; and if there were no emigration the men would differ little in number from the women, the former being 2,060,652, the latter 2,055,238. The annual mortality of persons of all ages would be 1 in 41.16; the annual mortality of persons aged 50 and upwards would be 1 in 20.55, for these are the expectations of life, and in a stationary population the number out of which one dies annually is the mean duration of life in years.

"I am very far from thinking that the use of a national life table in pecuniary transactions is the most important to which it can be applied. It is, nevertheless, this use which led to the study of life contingencies, on which many millions of money are invested; and if England took the lead in the investigation of the value of such contingencies, and can boast of the labours of Halley, De Moivre, Simpson, Price, Morgan, Milne, and other eminent living writers, it must be ascribed in part to the demand for this information in financial and mercantile transactions—another instance of the favourable reaction of the trading interests of the country on the highest departments of science, and on the physical condition of the people."

In the illustrations given by the Registrar-General in relation to the English life table to avoid confusion in the exposition, he assumes the law of mortality as invariable. This assumed uniformity is not intended to imply that the external circumstances in which men live have no influence on the duration of life; it only serves to prove that life being regulated by constant laws, the circumstances adverse or favourable to existence, produced by compensations of various kinds, the same results. The mortality of England, it is well known, varies with every year, and the mortality of 1841 was rather lower than in previous years. Mr. Farr's table therefore may be regarded as a near approximation to a mean table.

Three examples are given to show the application of the table to the determination of the relative duration of life in three different portions of the population of England, viz: the population of Surrey (out of the metropolis,) of the metropolis, and of Liverpool. Surrey shows the rate at which life wastes in the country population; Liverpool is an example at the other extreme, of the effects of concentration in towns, without any adequate provision for removing the effluvia and for securing by art the degree of purity in the dwellings and atmosphere which is partially maintained by nature in an open cultivated country. Surrey, it is stated, has not been selected as the healthiest country, nor must Liverpool be regarded the most unhealthy town in England.

"The population of the extra-metropolitan parts of Surrey," observes Mr. Graham, "happens to be but little more than the population of Liverpool; yet in 1841 the deaths in Surrey were 4256, the deaths in Liverpool 7556. Out of 14,450 boys under 5 years of age, 2087 died in Liverpool; of 14,045 boys in Surrey, only 699 died in the same time. By this immense mortality in Liverpool the number of males living at the age of 10-15 is reduced much below the number in Surrey at a corresponding age; the living in Surrey aged 20-30 are 18,746, but the influx of immigrants into Liverpool raised the number of males living there at that age to 23,494, who are rapidly cut down by sickness and death, so that at the age 45-55, only 7,504 males were enumerated in Liverpool, while 9281 were living in Surrey. From the life tables we shall be able to determine how many survive each successive age, and to calculate the expectation of life.

"According to the Surrey observations 75,423 of 100,000 children born, attain the age of 10 years; 52,060 live to the age of 50; 28,038 to 70; in Liverpool only 48,211 of 100,000 live 10 years; 25,878 live 50 years; and 8,373 live 70 years: in the metropolis 64,921 live 10 years; 41,309 live 50 years; and 16,344 live 70 years. The probable duration of life in Surrey is 53 years, in the metropolis 40 years, in Liverpool 7 or 8 years: the mean duration of life does not differ so enormously; it is, however, 45 years in Surrey, 37 years in the metropolis, and only 26 years in Liverpool; at the age of 30 the expectation of life is 35 years in Surrey,

27 years in Liverpool; at 50 the expectation of life is 21 years in Surrey, 16 years in Liverpool.

"It might be cited as an illustration of the necessity of registration and of calculation in these matters, that, before the annual abstracts of deaths were published, some of the best informed people believed Liverpool one of the healthiest spots in England; and the late Mr. Rickman inserted, doubtless on what he at the time considered good authority, the following note in the population abstracts of 1831: '*The great increase in the town of Liverpool is attributed to the salubrity of the air, and the progressive improvement in its trade, commerce, steam navigation, and railroads.*' I am not aware that the increase of population in any other localities was ascribed to their noted 'salubrity.'

"It will be seen below that allowing for the increase of population, the mortality in Surrey and in Liverpool was slightly below the average in 1841. It was a little below the average of the three years 1839-41 in the metropolis; but the deaths were less by 7000 than the deaths in 1838.

"I have stated that the mean duration of life in Surrey is about 45, in Liverpool about 26 years; now if all the inhabitants lived 45 years in Surrey and 26 years in Liverpool, the difference would be obvious, but such is not the law of nature; in both a certain number of deaths takes place at all ages, and at the census 3 males and 11 females were returned as living in Liverpool at the advanced age of 95 years and upwards. Little dependence, it is true, can be placed upon the statements of age in the table deduced from the returns in one year (1841) after the age of 90; but it is quite possible that isolated individuals may live 100 years in Liverpool, though they have little or no effect on the average duration of life, which differs from that of Surrey, as has been already seen, in the proportion of 26 to 45 years.

"Addison, in one of his popular papers, '*The Vision of Mirza*', has an allegory which was probably suggested by Halley's table; he compares 'human life to a bridge consisting of threescore and ten entire arches, with several broken arches, which, added to those which were entire, made up the number to about a hundred.' '*I see multitudes of people passing over it*' said he, '*and a black cloud hanging on each end of it.* As I looked more attentively, I saw several of the passengers dropping through the bridge into the great tide that flowed underneath it; and upon further examination perceived there were innumerable trap doors that lay concealed in the bridge, which the passengers no sooner trod upon, than they fell through into the tide, and immediately disappeared. These hidden pitfalls were set very thick at the entrance of the bridge, so that throngs of people no sooner broke through the cloud, but many of them fell into them. They grew thinner towards the middle, but multiplied and lay closer together towards the end of the arches that were entire.' Our life table follows a 'throng' of 100,000 that 'brake through the cloud' into life at the same moment, and counts them as they step on every arch. It shows, therefore, how many fall through the 'hidden pitfalls.' The danger is exactly measured. The arches over which sickly multitudes pass, are the same in number as those traversed by a healthy people; but the 'trap-doors' and 'hidden pitfalls' in their way are twice as numerous, though they can only be perceived by careful observation and counting; while a difference of 26 and 45 'arches' would be obvious to the unassisted eye.

"In the law which regulates the waste of life two things have been reconciled: the uncertainty of the hour of death, and the constancy in the same circumstances of the mean duration of man's existence. The days of successive generations are numbered, yet a child born to-day may die in any hour, or minute, of the next *hundred years*; and until a very advanced age the chances always are that the time of death will be several years distant: the danger of death we know varies at different ages, and in different states of health; but if the limit of life be 100 years it is on an average 36,525 to 1 that a person will not die on a given day; 876,615 to 1 that he will not die on a given hour, 52,596,912 to 1 that he will not die at a given minute. These chances—doubled or trebled as life advances—are so low that practically they have little or no influence in ordinary affairs; and as a general rule men have, indeed, no fear of dying upon any *day*; yet the knowledge that they *may* die at any instant, exercises a salutary check upon their conduct; and, notwithstanding its sometimes appalling effects, the changing certainty or uncer-

tainty of life, according to the different aspects and points of view, is in harmony with the feelings, hopes, moral constitution, and destinies of mankind.

"The serious disadvantages which arose from the difficulty of perceiving the changes in the duration of life, and consequently the influence of external causes upon health and longevity, has now been overcome in this country by the arduous labours of scientific inquirers, and by the conjoint enumeration of the ages of the population and the registration of births and deaths."

The Registrar-General has given seven diagrams in which the differences in the duration of life of various portions of the English population are rendered obvious to the eye. The first is intended to represent the progress of an English generation through life; a light shade indicates the living, a darker shade the dead, at each age out of a given number (100,000) born alive. Vertical lines divided into 10 degrees serve to measure, at every 5th year, the number alive and dead at the respective ages. The other diagrams exhibit the same facts for Surrey, Liverpool, and the metropolis. In *Ireland*, "the expectations of life" are represented as being the same at birth, in the rural districts, as in England. They are less after the age of 20 years, but agree remarkably at all ages with the expectation of life in the metropolis. At birth the expectation is higher in the Irish towns than in Liverpool, but lower than in London. The "expectation of life," therefore, is not so low as it is represented in the tables of the commissioners, which would seem to show that the Irish live only 24 or 29 years, whilst the English live 41. The life tables of the English metropolis, and Liverpool or Manchester, would probably apply to the two sections of the Irish population.

"It is," says the Registrar-General, "a curious feature of the Irish tables that the men appear to live longer than the women in 'rural' districts; and the women longer than the men in 'civic' districts. Frenchmen live longer after 20 than the women, if the expectations of life in the two sexes be equally correct in M. Demonferrand's tables. In England the lives of females exceed those of males by about a year—except at birth when the difference is greater. In Surrey the females from the age of one year and upwards live a little longer than the males; the difference is greater in the metropolis, where it amounts, at some ages, to two or three years. This may, perhaps, account for the differences in the expectations of life deduced from male and female annuitants. According to Mr. Finlaison's tables—the lives of men are from four to six years shorter than those of women; a discrepancy which in its extent is entirely at variance with all other observations. If the majority of the annuitants before 1829 were inhabitants of London, and more than a due proportion of the women lived in the country, such a discordant result would however be produced."

Besides the weekly table of the metropolis, there are now furnished quarterly tables of mortality in 114 of the most populous districts in England, comprising some agricultural parishes and the principal towns. These returns from 571 registers include nearly half the deaths in the kingdom, and being published within a month of the close of every quarter show the sanatory state of the country in a specific and unquestionable form. These tables serve to give almost immediate warning of any great increase in the mortality of particular districts. They must also prove useful in preventing false and mischievous reports, and show where measures are required to improve the sanatory condition of suffering localities.

The subjects embraced in the report of the Registrar-General are of such immense importance, that too much attention cannot well be directed to them by enlightened communities. In a subsequent number we propose to enter into some examination of Mr. Farr's letter, which forms a long appendix to the report. This letter furnishes an abstract of the deaths from small-pox, measles, scarlatina, &c., in the various towns and districts in England, with other topics especially interesting to medical readers and inquirers.

G. E.

ART. XV.—*Beiträge zur Medizin, Chirurgie, und Ophthalmologie.* Von CHR. CONR. WUTH, Dr. Med., Chirurgiæ et Artis Obstetriciæ, praktischem Arzte, etc. in Hanover. Mit abbildungen. 8vo: pp. 134. Berlin, 1844.

Contributions to Medicine, Surgery, and Ophthalmology. By CHR. CONR. WUTH, Doctor of Medicine, Surgery, and the Obstetric Art, &c. With plates.

THE contributions of Dr. Wuth consist in a number of short, but in general, very sensible observations, upon various points of pathology and practice, together with the history of several cases of disease treated by the author; these latter indeed constitute the most interesting portion of the work. We shall present to our readers an abstract of a few of them.

The following five cases are presented under the head of *Amaurosis*.

1. A female, resident in Hanover, 27 years of age, had an encysted tumour of the size of a pigeon's egg, situated upon the right supra-orbital region, immediately beneath the eyebrow. The tumour had commenced to form many years previously to our seeing the patient—it had gradually increased in size, and was at intervals, painful. At first, she had suffered from a periodical amblyopia, during which the pain was experienced, and as the pain ceased, the sight was again restored. Gradually a complete amaurosis ensued, at first periodically, but at length permanently. For some time, the severe paroxysms of pain had ceased to occur, but a troublesome sensation was still experienced at the same intervals at which the pain formerly occurred. The tumour was extirpated, which was found to have formed an adhesion with the supra-orbital nerve, its separation from which was attended with considerable pain. The nerve, as well as the parts in its neighbourhood, were reddened and in a state of hypertrophy. The edges of the wound were drawn together, and held by portions of adhesive plaster and a compress of charpie: it quickly healed, and at the end of seven weeks the sight of the patient was again permanently restored.

2. A lad, 7 years old, of Great Goltern, was suddenly, without previous indications of disease, seized with convulsions, which were followed by amaurosis and deafness. These affections had existed for six months before the patient came under our treatment. The patient could not stand firmly upon his feet, and in walking staggered from side to side—he stared fixedly before him, although he was unable to distinguish any object. There was an appearance of stupidity in his countenance. The lad slept much; the other functions, however, were not perceptibly disturbed. Believing that an effusion had taken place into the ventricles of the brain and in the spine, a combination of calomel and digitalis was administered, leeches were applied to the head and behind the ears, and a blister was put on the back of the neck, which was kept open by an irritating salve. Under this treatment, at the end of nine weeks, the deafness was removed, the walk of the patient was somewhat improved, and he could distinguish any large object. An attack of convulsions again occurred. The spine was now examined according to Copland's plan, and when by this we had discovered a suspicious spot, pressure was made upon it with the fingers. In the neighbourhood of the second dorsal vertebra we found the spine painful upon pressure; and each time the pressure was applied a highly interesting phenomenon took place—the contraction, namely, of the iris. By making alternately more or less pressure upon the painful vertebra we were able to produce an actual oscillatory motion of the iris. Pressure upon the spine produced, also, a spasmotic tremor of the limbs which, by an increase of the pressure, was increased to actual convulsions. As these symptoms seemed to indicate a local irritation of the spinal marrow, the influence of which was extended to the organ of vision, leeches and cups were first applied in the neighbourhood of the second dorsal vertebra, and afterwards issues were formed at this part, and every tenth day, a small moxa was resorted to. At the end of nine months the patient was so far improved that he could clearly distinguish objects presented before him; it was observed, however, that he looked at them sideways; both eyes being in this manner directed to the same point, no actual squinting occurred. Pressure upon the spine was now unattended with pain and gave rise to no convulsive movements. Galvanism, with acupuncture, was now resorted to. The galvanic current was directed alternately from one side to the other, and from the upper

to the lower portion of the affected portion of the spine. However gently the galvanism was applied the patient obstinately refused to submit to its continuance; we attempted, therefore, a still milder method of applying it: small hollow balls of silver and of copper were laid upon the issue formed on each side of the spine, and connected by means of plates of zinc. At intervals, however, the balls were exchanged for peas. At the same time digitalis and arnica were administered internally, and every eight days a purge of calomel and jalap.

After this treatment had been continued for three months, the distortion of vision became somewhat lessened, though the sight was still feeble.

It was suspected that some chronic affection of the spinal marrow or of the ventricles of the brain still continued to exist, perhaps an exudation of lymph which had become organized. At the end of a year the patient exhibited no further improvement.

3. A labouring man, 45 years of age, residing in Hanover, was brought to us for our examination. He represented himself as blind of both eyes, and begged us to tell him candidly, before we placed him under treatment, whether there was any hope of his sight being again restored.

The patient stared at us with eyes wide open, as amauroties are accustomed to do. Upon a closer inspection of the eyes, we found the conjunctiva of the bulb slightly reddened, a considerable development of blood-vessels upon the sclerotica, and a dilatation of the pupil—no contraction of which took place when the eyes were exposed to a ray of light. The patient was unable to distinguish day from night. On examining the eye with a magnifying glass, a number of spots were observed here and there at the bottom of the inner chamber, which had the appearance of being prominent. The patient did not complain of actual pain but of a sense of tension in the globe of the eye, as though it had become enlarged. He stated that often, towards evening, he experienced flashes of light like lightning which were attended with a sense of heat within the eye. Occasionally the patient complained of a compressive pain of the head, which finally seated itself in the supra-orbital region; he was frequently, also, tormented with a singing in the ears, which continued, sometimes, without intermission for the whole day, and was attended with a dullness of hearing. The pulsations of the carotid and temporal arteries exhibited a peculiar hardness, while those of the radial artery were proportionably soft.

The patient had a luxuriant head of brown hair; his complexion was somewhat dark; his cheeks were red, and the temperature of his head was increased. He had a short neck, broad shoulders, and well developed, though somewhat flaccid muscles. In the epigastric region a morbid pulsation was detected. His appetite was excellent, but his bowels were costive and stools were only obtained by the use of purgatives. The patient suffered constantly, even when warmly covered in bed, from cold feet.

The pupil of the left eye was distorted; its inner edge adhering by means of a small filamentous process to a cicatrix on the cornea.

Very often, particularly in the night time, the patient experienced acute pains in his limbs.

Previous to the occurrence of his blindness the patient was employed in cleansing out the city ditches, and was obliged often to work all day long standing in the water up to his middle; at the same time he was habituated to the use of large quantities of ardent spirits daily. His sight at first became impaired, and gradually was lost entirely, notwithstanding all the remedies he had employed.

It was considered that the patient laboured under a congestive condition of the brain, which also implicated the organ of vision. The condition of the left eye was supposed to indicate a chronic rheumatic iritis which had produced a hypopyon and adhesion of the iris. The projecting lines observed at the bottom of the eye were evidently the indications of a varicose condition of the choroid coat; while the occasional tensile pain of the eye was presumed to be rheumatic, and the sense of fullness experienced in the organ the result of a congestive condition of its vessels.

The indications of cure were determined to be first, to overcome the congestion of the brain, and secondly, to remove the rheumatic symptoms.

Eighteen ounces of blood were drawn from the arm, cups were repeatedly ap-

plied to the back of the neck, stimulating pediluvia were resorted to, and, inwardly, a solution of sulphate of magnesia with tartar emetic in divided doses; the patient being at the same time put upon a spare and restricted diet.

After several weeks continuance of this plan of treatment, the congestion in the head was diminished, and the patient began to distinguish between day and night. The same treatment was still continued, with the addition of cold douches, and a seton in the neck which was allowed to remain for three months. The power of vision gradually improved; the rheumatic pains of the extremities, however, returned with increased severity. The limbs were, therefore, enveloped in undressed wool and the patient was directed to take fifteen drops, three times a day, in a draught of elder tea, of the following: R.—Tinct. colchici e sem., ʒss; hydr. muriat. corros., gr. j.—M. The dose of this was gradually augmented to twenty-five drops, three times a day. After continuing the mixture for some time the patient became affected with diarrhoea in consequence of which a portion of tinct. opii was added to each dose.

Notwithstanding under this treatment all symptoms of congestion and of rheumatism were removed, still the power of vision exhibited no further improvement. It was determined to act directly upon the eye by the employment of galvanic acupuncture, and frictions with the following wash two or three times a day applied in the neighbourhood of the affected organ: R.—Liquor ammon. vinos., ʒss; olei anthos et foeniculi, Ȑā gtt. x; tinct. arnicæ mon., ȝij; spirit. angelic. compositi ȝjss. M. The patient, at the same time, taking the tinct. guaiaci ammoniata with an infusion of flor. arnicæ, sambuci et sem. fœnicul. Under the use of these remedies at the end of two months he was restored to the full possession of his sight.

4. A young man, of Lüersen, 27 years of age, had been affected for nine months with amaurosis. As he approached us we were struck with the peculiarity of his gait, which appeared more like that resulting from a commencing lameness, than the usual gait of an amaurotic. He had light hair, and a delicate complexion. He particularly complained of a severe tensive pain of the forehead and temples, which often deprived him of consciousness, and was increased by the slightest noise. When the pain acquired a certain degree of intensity it brought on vomiting.

The patient's pulse was rather slow—upon a closer examination of his eyes, no perceptible motion of the pupil was discovered, it being unaffected by the admission or abstraction of light. The exposure of the eye to light, according to the statement of the patient, produced a sensation like that resulting from a flash of lightning; this photophobia was experienced even in the dark, notwithstanding his inability to distinguish day from night.

The patient was judged to labour under an amaurosis erethica, resulting probably from some disease of the brain or spinal marrow—as inflammation with exudation of the arachnoid membrane.

According to the account given by the patient his blindness had been caused by the repulsion of a furuncular eruption by exposure to wet and cold.

The patient was placed on low diet, and, locally, inunctions were resorted to; by these means the acute pain was removed, the photophobia remedied, the pupil rendered somewhat movable, and the patient enabled to distinguish, in faint outline, external objects.

No further improvement ensuing, in succession, electricity, strychnine applied endemically to the temples, and frictions with tartar emetic ointment to the neck, were resorted to. It being observed that the secretion of urine was very much diminished, with a view of augmenting the action of the kidneys, the administration of the tincture of cantharides was decided on—and in proportion as the secretion of urine was by this means increased, the power of vision augmented, so that in five months the patient's eyesight was entirely restored and his gait had become at the same time firm and natural.

5. A girl 9 years old, from Grohnde, of a scrofulous habit, had for a long time been affected with a scrofulous eruption, which finally extended to the head. This eruption was suddenly repelled by exposure to cold, after which by degrees her sight diminished, and she became at length completely blind, in which state she had continued for six months. The patient had the ordinary look and gait of an amaurotic. The pupil, although not very much dilated, was almost entirely insensible to light. As we could observe in or about the eye no other morbid

change, we concluded that the sudden suppression of the eruption on the head was alone the cause of the blindness. It was attempted, therefore, to reinduce the eruption by frictions with the croton oil to the head and neck, the patient taking at the same time, the oleum jecoris aselli with a solution of kalihydro-jodinic, and an infusion of rad. emulæ et stipit. dulcamaræ. The effect of this treatment was altogether surprising, for no sooner did an eruption appear upon the surface, than the patient's power of vision was restored. The same treatment was continued for some time longer. At the end of two years, the girl continued in the enjoyment of perfect vision and good health generally.

The following account of the extirpation of a somewhat uncommon morbid production within the eye, which Dr. Wuth denominates a *pseudo-morphosis iridis*, will no doubt prove interesting to our surgical readers.

Frederick Meyer, of Ronneberg, had on the iris of the right eye a morbid formation, which extended in front of the iris like a thick rounded disk. It extended within the pupil to the ciliary band and on passing through the pupil into the anterior chamber of the eye, it expanded in such a manner as to cover and conceal the iris; forming a complete mechanical obstruction to vision. In form it somewhat resembled a mushroom; at the periphery of its upper expanded portion, the edge was bent inwards and downwards; while at the middle of its outer surface was an umbilicated projection. Its colour was the same as that of the iris, and from the centre to the circumference there proceeded slender rays of a lighter tint.

The patient stated that this morbid production had commenced to appear about four years previously, and supposed it to have been caused by a spark of fire flying into his eye—which caused instantly a severe pain that, at first, continued to recur periodically, but, subsequently, was incessant and attended with a sense of compression within the globe of the eye. He had had tincture of opium dropped into his eye, and had employed various ophthalmic salves and collyria.

The particular form of the morbid growth as well as its colour, rendered it probable that it was attached within by a small pedicle. It being decided to attempt its removal, an incision was made through the cornea, and a silken ligature was passed, by means of a peculiarly formed fine English needle, to which a small handle of cork was attached, into the opening through the cornea around the fungous growth, and then out again through the incision, thus including within a loop of the ligature the base of the tumour. It was believed, from the soft and delicate structure of the fungus, that when the ligature was drawn tight it would be separated from the iris: which proved to be the case. Soon after its separation the anterior chamber of the eye became filled with blood—and subsequently some degree of inflammation occurred which was readily subdued by an antiphlogistic treatment. The sight of the patient is entirely restored, and only a slight distortion of the pupil remains.

The fungus was of a fibrous structure and very vascular; it is to be included, according to Dr. Wuth, in the class of Telangiectasic growths.

The following case of *polypi of the frontal sinus* is one certainly of uncommon interest.

Frederick Lages, of Leweste, ten years of age, was brought to us by his parents in consequence of a disease of the eye, for which, as they stated, a great variety of internal and external remedies had been prescribed by various physicians.

The patient had been affected for a long time with severe pain of the head which had allowed him but few days or nights of quietness.

But the chief and most important affection under which the patient laboured, was a complete dislocation of the left eye, which was protruded so far forwards out of its socket as to be on a level with the ridge of the nose; externally it projected far beyond the outer edge of the malar bone, so as to destroy completely, on the left side, the natural outline of the face, and at the same time it was thrown so far downwards as to be on a level with the point of the nose. The patient for the last three years was unable to close completely over the dislocated ball the eyelids; the cornea and four lines of the sclerotica remained always exposed. The tears consequently flowed constantly down the cheek. The orbicularis muscle was morbidly developed in consequence, evidently, of the continued antagonism between it and the pressure of the eyeball outwards,—at the same

time by its grasping the latter with its circle of enlarged fibres it no doubt now tended to increase its projection.

Upon the cornea was a large deep ulcer which caused a speedy perforation of the coat of the eye, and an entire destruction of the organ to be feared. A convolution of very prominent varicose veins covered the visible portion of the conjunctiva.

The projection of the frontal and nasal bones on the affected side, seemed to indicate that the eye had been gradually protruded from its orbit, in consequence of the dimensions of the latter having become more and more contracted from the constantly increasing approximation of its upper towards its lower bony parietes. The left side of the nose was protruded forwards so as to form a surface level with the ridge, and when the finger was attempted to be introduced into the left nostril it experienced a firm resistance. The left eyebrow was separated from its fellow and depressed. The skin covering the brow was thickened and of a pasty feel; near the outer and inferior surface of the left eyebrow was a small opening, out of which, when pressure was applied in the neighbourhood, a whitish, slimy fluid was discharged.

It was stated that about 9 years ago the lad had been attacked with a disease attended with a red eruption upon the surface of the body, cough, and severe pain of the head—probably measles. That soon after this his present affection commenced and had gradually attained the height it now presented—the patient during its entire progress, suffering from almost constant pain of the head and loss of sleep. Notwithstanding there were great emaciation and a sallow colour of the face, the patient appeared to have possessed an originally firm constitution, which was still not entirely destroyed.

It being decided, after a close examination of the case, that the dislocation of the left eye and the other symptoms under which the patient laboured, were dependent upon the development of a polypus in the frontal sinus, an operation for its removal was agreed upon and performed as follows:—

A perpendicular incision was first made down to the bone, extending two inches from the root of the nose upwards, and then a horizontal incision of the same length over the eyebrows. The triangular flaps thus formed were next separated from the soft parts to such an extent as to permit the application of the trephine, by which, a portion of the bone being removed, the cavity of the frontal sinus was exposed. In the centre of the superciliary ridge there existed a small opening of scarcely one line in diameter, which communicated with the cavity of the sinus, through which the discharge of fluid already noticed had taken place; the soft parts surrounding this opening were in a state of chronic inflammation, swollen and puffy. From the enlarged state of the vessels at this part, a considerable hemorrhage took place. In consequence of the very great enlargement of the sinus, it was decided to make two openings by means of the trephine. The cavity of the sinus was found to be filled by a number of polypi, attached to each other like a cluster of grapes, and surrounded with a milk white fluid.

The greater part of the polypi were removed by the knife. After removing the slimy fluid by which they were covered by washing them in cold water, they were found to be of a bright yellow colour, and almost diaphanous, each polypus presenting two or three vessels which proceeded in the direction of its largest diameter, until they reached its free extremity, where they divided into an arborescent form. In the upper portion of the sinus the polypi were of a gelatinous character, partly soft and easily crushed, and partly of a firmer consistence and of a cellular structure, from which a slimy fluid was discharged by pressure. In the centre portion of the sinus the polypi were thicker, firmer and opaque, posteriorly and on the walls of the cavity the polypi were of a fibrous structure. The difference in the character of the polypi was probably caused by the different periods of their formation. The sinus terminated at its inner and outer sides in smaller cavities, and a cellular structure into which the polypi had penetrated.

The next consideration was the means best adapted to destroy the polypi which remained within the small cells of the sinus and upon its sides, without injury to the thin partition of bone by which the cavity was separated from the cavity of the skull. By a slight pressure of the fingers this could be bent inwards, and the pulsations of the brain were felt distinctly through it. It was even feared

that it would be destroyed by the motions of the brain, now that all resistance was removed from its outer surface by the opening of the cavity and the removal of the polypi. We abstained, therefore, from the use of caustic and all applications of a decidedly irritating character. The parietes of the sinus were sprinkled with a mixture of tinct. opii and acetat. plumbi in equal parts, and then covered with an ointment formed of unguent. zinci ʒj, kreosote gtt. x, spread upon charpie. An opening was made from the nostrils through the bony partition—the ethmoid cells, concha, &c.,—into the cavity of the sinus, and into this opening was introduced a silver canula, in order that a free discharge might be allowed to any fluid that might collect in the sinus. The discharge of the tears over the cheek caused by the obliteration of the lachrymal canal was prevented by forming a new channel at the usual place, and introducing a canula. So soon as this new artificial channel for the tears, as well as that between the sinus and cavity of the nose, was so far perfected that the canula could be removed, and from the appearance of the parietes of the sinus we were convinced that there was no reason to fear a new formation of polypi, the opening made through the frontal bone was allowed to close, which it did within one year from this period; when the morbid distension of the sinus was very considerably reduced and the eye had partly returned within the orbit. The ulcer of the cornea had quickly cicatrized after the operation, leaving a leucoma which had evidently become diminished in extent—the sight of the patient is much improved, and the deformity of his visage considerably lessened. The patient during the whole period of cure took no medicine whatever internally. The night after the operation he enjoyed a long, profound sleep, the first he had enjoyed for many years. The first six weeks were passed pretty much in sleeping and eating, in consequence of which his strength and vigour rapidly improved, and the nutrition of his system was perfected. After this period, we saw the patient every six months, and found each time the deformity diminished, so that probably it will finally be almost entirely removed.

By the foregoing case the following physiological and pathological positions are established.

1st. The possibility of the power of vision continuing notwithstanding the optic nerve has been subjected to a gradual stretching and consequent elongation.

2d. The enormous distension in every direction, of which the frontal sinus is capable, so that, as was the case in the present instance, its cavity may become large enough to contain more than three hens' eggs.

3d. Its capability of again returning, when the distending cause is removed, to very nearly its normal dimensions.

4th. That the complete division of the supra-orbital and frontal nerves is not destructive of the power of vision.

5th. That the presence or absence of pain, a fact which has been heretofore in a great measure overlooked, is not to be considered a pathognomonic sign of the malignant or non-malignant character of a tumour; this is proved also by the painful character of many indurations of the mammary and other glands, which, when left to themselves, spontaneously disperse.

The following is an account of an adhesion, formed by the interposition of a pseudo-membrane, between the eyelids of the right eye.

This uncommon form of adhesion, of which a drawing is given, occurred in a girl seven years of age; it was consequent upon a scrofulous inflammation of the eye, and concealed when the lids were unclosed nearly the whole anterior portion of the ball, the inner canthus being the only part uncovered by it. The membrane adhered only to the edges of the two lids, the globe of the eye moving freely behind it. It had a soft elastic texture, and upon the closing of the eyelids, it contracted like a stretched portion of gum caoutchouc, so that when the eye was closed there existed an empty space between it and the membrane. In its contracted state, it felt soft and pliable. When the eyelids were unclosed, numerous decussating fibres, elevated above the surface of the membrane, were seen to pass from the edge of one lid to that of the other; its external surface was likewise beset with numerous serpentine vessels, while its inner surface was smooth like the conjunctiva, but reddened by the presence of numerous small blood-vessels.

The membrane was removed by dividing it by means of a scissors close to

the palpebral edges. There was but little hemorrhage, and this was soon arrested by cold compresses. The aqua saturn. with tinct. opii was applied subsequently. We found upon its removal that the pseudo-membrane proceeded from the conjunctiva and, in the opinion of Dr. Wuth, was similar in its character to that which forms on the conjunctiva the appearance denominated *pannus*; the difference in character resulting from the action of the eyelids, to the influence of which, from its position, it was constantly subjected.

The following case of *artresia ani* is interesting from the complete success attendant upon the operation that was performed to remedy it.

A female child, four years old, was affected with a congenital absence of the anus, the rectum terminating in the vagina. After the first year, in consequence of their increased consistence, the passage of the feces was attended with difficulty. An operation had already been attempted by another physician, but without any benefit to the child. Dr. Wuth passed a bent hollow sound from the vagina into the abnormal opening of the rectum, and upon this he divided, with a bistoury, all the soft parts between it and the vagina, down to the spot where the natural termination of the rectum should be; the rectum was now dissected from the posterior parieties of the vagina, so that its divided edges could be attached to the lower end of the incision; the parieties of the vagina were now brought together by means of four sutures, a thick gum elastic bougie was introduced and retained for a long time, at the same time cold water was frequently injected. A complete cure was in this manner effected.

The following is an instructive case of prolapsus of the ciliary body and iris.

A lad, seven years old, was struck in the eye with a stone, and in consequence of the injury thus produced, had been eight days under the care of another physician. When seen by Dr. Wuth, the cornea and sclerotica of the left eye were torn open from before backwards, and through the wound there projected a portion of the ciliary body and the greater part of the iris. The wound was about half an inch long. The iris was so far prolapsed that the pupil was drawn between the edges of the wound. The form of the eye was altered in consequence of a partial collapse of the ball. The lower half of the anterior chamber was filled with pus. The treatment pursued was to apply, every third and fourth days, leeches alternately behind the two ears and to the eye. At the same time during the day compresses were applied to the injured organ, and kept wet with the following mixture: R.—Zinci sulphurici 3j; plumbi acetici 3ij; extr. herb. belladonnæ 3ss; aq. fontanæ 1ij.—M. In the evening unguent. hydr. ciner. with extract. belladonnæ was rubbed in. The patient took at the same time digitalis with cooling salts. By the continued use of these means the prolapsus of the ciliary body and iris gradually diminished and finally disappeared: the wound in the cornea and sclerotica cicatrized, and the eye regained its normal form. The pupil, behind which a cataract existed, although still somewhat distorted, regained in a great measure its normal form. The cataract became in time absorbed. Having repeatedly met with this species of cataract following injuries of the eye and found it very generally to be spontaneously removed, the capsule of the lens being usually torn and the lens dislocated, we therefore always wait a long period before proceeding to an operation. In the course of time the pupil became so much contracted that the sight was almost entirely destroyed; we therefore subsequently formed an artificial pupil which fully answered our expectations, inasmuch as by it the patient was restored to very perfect vision.

Many of the other cases contained in the volume before us are equally interesting with the foregoing; we shall, however, close our notice with the translation of the following.

An old man, 71 years of age, had suffered for nine months from a severe pain in the region of the bladder, which commenced every morning at three o'clock, gradually increased in intensity until 10 o'clock, after which it began to decline and ceased about noon. The pain when at its height was so intense as to cause the patient to utter the most plaintive screams and to throw his body in every direction. Upon examination it was ascertained that there existed no stone in the bladder. The patient previously to the occurrence of these paroxysms of pain had been affected with an itchy eruption upon the perineum. He had taken a great number of remedies without the least benefit. The patient was much emaciated,

and so great were his sufferings that he declared he would rather die than endure them any longer. Following the maxim that severe diseases demand severe remedies he was ordered to take two teaspoonfuls four times day of the following mixture: R.—Opii, rad. ipecacuanhæ, $\frac{aa}{3}$ ℥j; camphoræ ʒj; mucil. gum. acaciæ, syr. amygdal., $\frac{aa}{3}$ ʒj; infus. rad. valerian. $\frac{3}{2}$ vj.—M. By the use of this mixture for several days, the paroxysms of pain were greatly diminished in intensity, and by its continuance for a longer period they were entirely removed. The patient never exhibited any symptoms of narcotism, notwithstanding he continued the use of the above mixture daily for nearly three months.

Raucedo.—A female, 30 years of age, had for four years experienced a degree of hoarseness that almost amounted to aphonia. According to her account she had taken, during one of her confinements, a mixture containing elix. acid. Haller., which caused immediately a severe pain in the throat, succeeded by hoarseness, which, notwithstanding all the means that had been prescribed for its removal, had continued ever since. Such a variety of remedies both internal and external had been tried in her case without the least effect, that she had almost lost the hope of being benefited by any further treatment. Indeed, the long standing of the disease, the entire absence of pain, and the failure of all the means previously employed, afforded but little prospect of the voice being again restored—as the presumption was that some organic change had taken place in the vocal cords. Nevertheless a trial was made of the effects of the extract of conium in combination with calomel and sulph. aurat., the patient at the same time being placed on a diet of milk whey. Under this treatment, at the end of six months the voice of the patient was fully restored.

D. F. C.

ART. XVI.—*Principles and Illustrations of Pathological Anatomy; being a complete series of Coloured Lithographic Drawings.* By J. HOPE, M. D., F. R. S., Physician to the St. Mary-le-bone Infirmary, &c. First American Edition. Edited by L. M. Lawson, M. D., Professor of General and Pathological Anatomy and Physiology, in Transylvania University. 8vo: pp. 359 text, 71 of description of plates and 48 coloured illustrations. Cincinnati and Lexington: 1844.

THE republication of the pathological anatomy of Dr. Hope, with its illustrations, in this country, in a form and at a price which places it within the reach of every member of the profession, and which, at the same time, in its mechanical execution, does no discredit to the original, cannot fail to ensure to the American Editor and his enterprising publishers the sincere thanks of a large proportion of the students, as well as of the practitioners of medicine, throughout the United States.

The time has arrived when the importance of pathological anatomy, as the only certain foundation for a correct diagnosis and prognosis, is very generally acknowledged, and a disposition evinced by the teachers and members of the profession generally to encourage and facilitate its study and augment the mass of facts it already embraces.

There are few works better calculated to induct the student into a knowledge of the principles of this department of pathology, and to render him familiar with the leading morbid changes resulting from disease of the several internal organs and tissues, than the one before us. The descriptions of Dr. Hope are, in general, sufficiently lucid, while his pictorial illustrations communicate to the eye a very good representation of the lesions referred to in the text; at least sufficiently true to nature to cause them to be immediately detected in the dead body by any one familiar with the natural appearance of the different portions of the body, and possessed of sufficient skill to make an accurate necropsy.

The work of Dr. Hope treats first of the diseases of the respiratory system, under two divisions, 1st, lesions of the pulmonary parenchyma, and 2d, of the air passages. Secondly, of diseases of the heart; thirdly, of diseases of the liver, under two divisions, 1st, lesions of the parenchyma of the liver, and 2d, of the biliary apparatus; fourthly, of diseases of the alimentary canal below the dia-phragm; fifthly, of diseases of the peritoneum; sixthly, of external cancer; seventhly, of diseases of the uterine system; eighthly, of diseases of the kidneys;

ninthly, of diseases of the bladder; tenthly, of diseases of the spleen; and, lastly, of diseases of the brain and spinal marrow.

"As the number of *elementary* lesions, like the primitive words of a language, is comparatively small, a knowledge of these lesions—which it is the object of the present work to convey—will greatly circumscribe the sphere of study and lighten the burden of memory. Drawings, also, while they greatly curtail the labours of those who enjoy unlimited opportunities, enable others, less fortunate, to acquire a comparatively extensive and well-digested knowledge of morbid anatomy." The most important feature in representations of morbid anatomy is fidelity. The author has, for this reason, in preparing those which accompany the work before us, "taken the precaution of never drawing without the specimen before him, representations from memory being generally inaccurate, and to obviate changes of colour from decomposition or exposure to air, he has usually completed the drawings within a few hours after the specimen was removed from the subject."

The arrangement of the work, as we have already stated, is according to organs, "as being best adapted to the study of the diseases of organs, but the lesions of each organ are considered in reference to the particular tissues which they occupy, on the principles of general anatomy."

The text of Dr. Hope being purely elementary, and his description and pathological views corresponding with those generally received, a critical examination of the several chapters may be dispensed with, while the character of the work is such as to preclude any attempt at analysis.

The additions to the text made by the American editor are judicious and in keeping with the plan and spirit of the original. Dr. Lawson has succeeded in obtaining very accurate fac-similes of the illustrations, by which the work is accompanied; the execution of which is but little inferior to those of the London edition. The execution of the work throughout does in fact great credit to its editor as well as publishers, and we trust that their very commendable enterprise may be rewarded by a ready sale of the correct and beautiful, and, at the same time, cheap edition they have presented to the profession of the very valuable treatise of Dr. Hope.

D. F. C.

ART. XVII.—*A Treatise upon the Diseases and Hygiene of the Organs of the Voice.* By COLOMBAT DE L'ISERE, Chevalier of the Royal Order of the Legion of Honour, Doctor of Medicine, Founder of the Orthophonic Institute of Paris, for the treatment of all vices of speech, diseases of the voice, &c. Translated by J. F. W. LANE, M.D. 12mo: pp. 220. Boston, 1845.

THE subject of the present essay is confessedly a most interesting one. The mechanism of the organs of voice—the physiology of speech—the various causes by which the human voice is impeded, disturbed, or destroyed, are points which claim a much greater share of attention on the part of the physician than they have as yet received. It is true that every defect of voice, and every vice of utterance may not depend upon lesions of the organs concerned in its formation, of a strictly pathological character, or which we may have it in our power to prevent or remove; still, all our attempts to perfect the human voice—to remove its defects, and to develop in it the full extent of compass and of harmony, of which it is capable, must be based upon an acquaintance with the structure and vital laws of the apparatus by which it is formed—the manner in which this apparatus is influenced by external agents and modes of life, and the effects produced upon it by the diseases that may affect it either primarily or secondarily. The study of the voice, therefore, not merely affords many subjects of curious and interesting inquiry, but it is one of no trifling importance, inasmuch as by it alone we can determine the means, whether hygienic or therapeutical, calculated to secure to man the perfect and pleasing exercise of one of the most noble of his functions of relation.

In the essay before us, we are presented with a short description of the vocal organs—followed by an inquiry as to the true physiology of voice and speech.

The difference of the voice in the two sexes and at the different periods of life, is pointed out; its modification from modes of life, occupation and other circumstances is next referred to; the influence of the passions upon the voice and the difference of the vocal timbre according to the moral qualities and inclinations of the individual are briefly considered, together with the inflexions of the voice with regard to climate and nation. These, with a brief notice of the difference between the articulated and modulated voice, and the extent and harmony of the voice in music, are the subjects treated of in the first and second chapters.

The third chapter treats of the various theories that have been advanced to explain the mechanism of the voice—with an exposition of their errors and defects. M. Colombat, from various considerations which he has detailed in this chapter, was led to doubt the assertions of physiologists, which so repeatedly contradict each other, in relation to the mechanism of the voice, and he

“ Could not conceive why they have always had such a rage to compare the mechanism of the larynx to that of the different musical instruments; it seems to him, on the contrary, that it would be more natural to compare these latter to the larynx, which is the most ancient and harmonious of all instruments. I say, then, he adds, that the larynx resembles nothing but a larynx, and that the admirable organ of the voice is a wind instrument, *sui generis*, inimitable by art, and the living mechanism of which cannot be compared to that of any other, because the principles of the animal organization can never be communicated to a mechanical instrument, and because man will never have at his disposal the elements of vital action.

“ But, I shall be asked, since you do not admit the theories of physiologists, what explanation will you give of the formation of the voice? First, I shall reply, that I do not pretend to give explanations more mathematical than other persons, but simply, that the glottis is the instrument that produces the sounds, or rather, it is the air driven out from the lungs, which, under the influence of the will, by breaking against the lips of the glottis, produces sonorous undulations, modified by the pharynx, the tongue, the lips, the nasal fossæ, finally, by the entire vocal apparatus. I think, the formation of the vocal sound can be conceived of without having need of sonorous cords or vibrating reeds, and the production of the voice, and its different modifications may, indeed, be the result of a large or small opening of the glottis, caused by the contractions or relaxations of its lips. Everybody knows, too, that the constriction alone of the lips expresses, by whistling, varied, and even harmonious sounds, and that the air, and different gases may be expelled from the body of animals, with certain modulations, from openings, where, so far as I know, the existence of a *reed* or of *vocal cords* has never been suspected.”

The fourth chapter treats of the Pharyngean or *Faucette* voice. This voice is produced, according to M. Colombat, by a new glottis formed by the simultaneous approximation of the organs of the glottis, as follows:—

“ 1st. Inferiorly, the summit of the larynx and the base of the tongue; 2d, the pharynx, or posterior wall; 3d, the columns and tonsils at the sides; 4th, the veil of the palate, and the uvula, which, by their elevation, prevent the air from issuing by the nasal fossæ, as in the chest voice. When all these parts are approximated by the contraction of the muscles, the *bucco-pharyngean* cavity forms a cone, the base of which corresponds to the opening of the mouth.”

The whole of the author’s remarks on the faucette, or, as it is more often, but according to him, erroneously termed, the *falsette* voice, are in the highest degree interesting.

The subject of singing, or vocal music, is next considered—its powers and influence generally, are pointed out—and the hygienic advantages to be derived from its exercise, briefly alluded to.

“ The first of these advantages is the better development of the chest, and the strengthening of the vocal and respiratory organs, at the same time that our animal economy experiences the happy effects of an exercise filled with charms, and which exerts its sweet influence over our feelings and ideas.”

All our readers are aware of the remedial virtues ascribed to both vocal and instrumental music by the older physicians. M. Colombat would appear also to form no mean estimate of its curative powers.

“ In union with music,” he remarks, “ it often produces great effects upon the

nervous system, and may be made the means of cure in many nervous diseases." "The moderate exercise of singing may be advantageous in those affections with which the imagination is much occupied, such as dyspepsia, and gastro-enteralgia; by serving as a means of distraction, and dissipating the idea of the diseases, it will be made to disappear in part. A great many facts prove that singing, joined to music, is also very favourable in certain epidemics, *especially as a protective measure*, and the observations we have just made during the epidemic of the cholera, prove to us that those who were occupied with singing and music have but rarely been attacked by this terrible scourge." In a note the author remarks further:—

"In epidemics and other scourges of this kind, such as the cholera and the plague, which desolate an entire country, many persons fall victims to terror rather than disease. Reason and observation equally prove how useful singing would be to them, since it has always the property of dissipating their terror. It often happens that the mind, constantly occupied by the fear of the disease, calls for it, so to speak, and gives it birth. *Diemerbroeck*, in his treatise on the plague, cites several cases cured by singing and music. *Pigray*, who says that sadness and fear are the nourishment of the plague, also cites several observations of the same kind. *Desault*, too, declares that singing is advantageous in the treatment of insanity and consumption."

The chapter contains, also, a reference to the disorders resulting from the undue exercise of the vocal organs in singing—and the manner in which they are produced. It is a subject upon which we regret that the author has not entered into more full details.

Ventriloquy, its nature and mechanism, are shortly noticed. The author, who himself possessed the power of "closely imitating the voice of the ventriloquists," and only wanted "a certain degree of skill, and the facility so predominant among them of imitating all the vocal inflexions, to produce all the illusions of their art," remarks, in regard to the mechanism of ventriloquy, as it is improperly termed, as follows:—

"When it is my intention to speak with the voice of the ventriloquists, I employ the following mechanism:—at first, after having made a deep inspiration, the object of which is to introduce into the chest the greatest possible quantity of air, I strongly contract the veil of the palate, in order to elevate it so as completely to close the posterior orifice of the nasal fossæ. At the same time, I take equal care to contract the base of the tongue, the pharynx, the larynx, the columns, the tonsils, while I fix the point of the tongue behind the teeth of the upper jaw, and apply the dorsal face of this organ against the palatine vault. I cause the emission of my voice to be made with the expulsion of the least possible quantity of air from the lungs, and I easily obtain this result by forced contractions of all the muscles of the abdomen, chest, and neck.

"The principal secret of the ventriloquists then seems to be, to prevent the air from issuing by the nose, and to compel this fluid to escape by the mouth in a slow and forced manner. The voice is thus rendered hoarse, and seems to have the weakness and timbre, as if it were from a distance. To increase the deception, by giving to the voice a sound which seems to come from a determinate spot, it is sufficient adroitly to direct the attention to this spot, and afterwards to speak in that direction, by elevating in a greater or less degree the veil of the palate, so as to render the voice distant, or near, as the wish may be. The effort must also be made to speak with the least possible movement of the lower jaw, and to be careful to articulate in some sort with the mouth closed; finally, the ventriloquist should present his profile as often as he can, that his countenance may appear more at rest, and as destitute of expression as a blind man's; he will thus appear to take no part in the vocal sounds which are heard, and will easily succeed in producing a more complete illusion."

The chapter closes with some remarks on the mechanism of the cry, and the difference in its intonation according to the difference in the pain or emotion by which it is produced.

The fifth chapter treats of aphonia and dysphonia. These affections of the voice the author describes as of four species,—

"First. Idiopathic cases of aphony and dysphony, arising from a physiological, anatomical, or traumatic lesion of the vocal organs."

The causes of this species are, inflammations of the larynx, trachea, bronchi, fauces, tonsils, uvula, and veil of the palate; œdema of the glottis; laryngeal phthisis; thickening of the pharyngo-laryngeal mucous membrane; atony, paralysis, or spasm of the muscles of the pharynx and larynx; elongation of the uvula; division of the veil of the palate and palatine bones; wounds or contusions of the larynx and trachea, or an opening situated below the glottis; section or lesion of the laryngeal and pneumogastric nerves, and, we may add, certain adhesions of the arches of the palate occurring subsequently to operations upon the tonsils previous to puberty.

"Second. Aphony and dysphony, symptomatic of certain diseases which affect the whole economy."

This species may result from adynamic and ataxic fevers, certain verminose affections, pulmonary phthisis, aneurism of the aorta when it compresses the left recurrent nerve; lesions of the spinal marrow, excessive distension of the stomach, apoplexy, hemiplegia, anemia, general weakness, convulsions, epilepsy, hysteria, catalepsy, chorea, insanity, cholera, frenzy, acute moral affections, the abuse of ardent spirits, and the effects of certain poisonous and narcotic substances.

"Third. Sympathetic aphony and dysphony, depending upon the reaction which results from a pathological condition of certain organs more or less remote, and having no immediate relation with the vocal apparatus."

These may be caused by prolapsus or enlargement of the womb, or polypus in its cavity or ulceration of its neck, pregnancy, disturbances of the menstrual function, swelling or inflammation of the testicles, chronic hepatitis, derangement of the portal system, atony of the primæ viæ, suppression or diminution of a natural or artificial discharge, a sudden or too long-continued suppression of perspiration, especially of the feet.

"Fourth. Specific aphony and dysphony, resulting from a primitive or consecutive remote affection, which has been conveyed to the vocal organs."

These may be caused by syphilis, scrofula, scurvy, rheumatism, gout, psoriasis, herpes, and nearly all the exanthemata, and by certain effects resulting from the injudicious use of iodine and mercury.

In this classification, the cases of aphony and dysphony resulting from affections of the brain either acute or chronic, which are of frequent occurrence, are not noticed. According to the observations of M. Belhomme, recently communicated to the French Academy of Medicine, lesions of the faculty of speech are produced by disease or injury of the anterior lobes of the brain, or by some derangement of the organs of communication between the brain and those concerned in articulation.

Chapters six, seven, and eight, treat of chronic enlargement of the tonsils, of prolongation and prolapsus of the uvula, and of chronic inflammations of the larynx and trachea, and of primitive laryngeal phthisis, and their treatment.

In the chapter on sympathetic aphony and dysphony, M. Colombat has adduced a number of facts to prove the sympathetic relationship which exists between the sexual organs and those of the voice, and the effect upon the voice of various pathological conditions of the sexual organs in the male and female.

The account of the various diseases by which the voice may be affected is very brief. We notice nothing in what the author has presented in regard to their pathology and therapeutics which calls for particular comment. His views are, in general, correct, though we cannot perceive the necessity, in a work of the character of the one before us, of entering any further into their consideration than is necessary to point out the manner in which they disturb the function of speech and the extent of the disturbance produced by each. To do anything more, would demand a treatise that would embrace the consideration of a large portion of the more important diseases to which the human organism is liable.

The work of M. Colombat closes with a chapter on the hygiene of the voice.

There is much truth in the following remarks:—

"The development of the voice requires the most serious attention, and the vocal education should be commenced in infancy, by seeking, with all possible care, to obtain for an organ so admirable and precious, all the modifications of

which it is capable. From the first, the attention should be primarily directed to the development of the articulated voice, in order to impress in season upon the flexible and elastic organs of the child, the custom of performing those regular motions, which are indispensable to acquire, at the same time, a sonorous voice, a pure pronunciation, and natural and easy inflections. - This happy result may almost always be attained by exercising, at an early period, the children, either in speaking or reading aloud; but so as never to compel them by too great a prolongation of this exercise, or allowing them to take a tone too high or too low to tire or strain the vocal organs. They should be forbidden every sort of vocal display or forced cry, and thus their vocal organs, so easily modified at this age, prevented from assuming a harsh or sharp timbre, often too high, and very disagreeable to the ear. They should also be made to pronounce carefully all the syllables, [giving to each its proper quantity and accent,] and so to govern their voices as to make every period of a phrase perceptible. They should also avoid respiring too often, and too suddenly, which may give rise to a sort of hiccup, which not only may have the inconvenience of being ridiculous, but which may often even cause an irritation of the mucous membrane of the vocal cord, and produce an habitual hoarseness, sometimes difficult to overcome."

We commend the essay of M. Colombat to the notice of our readers, not from a belief that in it they will find all the information in regard to the physiology, pathology, and hygiene of the voice, they may desire, but because it is calculated to direct the attention of physicians to an all-important subject that has heretofore been too much neglected, and in relation to which we possess no treatise of any real value. The essay before us is far too concise to present anything approaching to a satisfactory view of the various questions embraced in it—many points equally important with those glanced at by the author, are entirely overlooked—while the chapters devoted to the pathology and the therapeutics of those diseases which either directly or indirectly alter or disturb the voice, are far too deficient in the necessary details to be of advantage to the practitioner—while the unprofessional reader they are only calculated to mislead. Nor is the chapter on the hygiene of the voice one of the leading objects, according to its title-page, of the essay—less exceptionable—the few remarks it contains are sensible enough, but it is very far from containing a full exposition of the causes calculated to injure the voice and the means by which these may be guarded against—while the directions given for developing its powers, accuracy, and harmony, are vague and imperfect.

D. F. C.

ART. XVIII.—*Die gallige dyscrasie (Icterus) mit acuter gelber atrophie der leber.* Von PAUL JOSEPH HORACZEK, Doctor der Medicin, magister der augenheilkunde und der geburtshülfe, gewesenem assistentem an den lehrkanzeln der speciellen pathologie und therapie, und der medicinischen kliniken an der k. k. Universität in Wien, mitgliede der medicinischen facultät. 8vo: pp. 145. Wein, 1844.

The bilious dyscrasia or icterus, with yellow atrophy of the liver. By PAUL JOSEPH HORACZEK, M. D., Master of Ophthalmologia and Obstetrics, formerly Assistant to the Professor of Special Pathology and Therapeutics, and to the Medical Clinic of the Royal University of Vienna, Member of the Medical Faculty. Vienna, 1844.

THE author of the present work has presented a very minute account of what he denominates "the most important form of the bilious dyscrasia," and which he considers as a primary or idiopathic disease of the blood, in consequence of which it is no longer in harmony with the nervous life of the organism, and which is invariably accompanied by an acute atrophy of the liver. Dr. Horaczek is of opinion that most of the cases of acute jaundice and many of those described as hepatitis, bilious fever, cephalopathia cholotica, pylephlebitis, &c.—are in fact cases of this disease; of this he is fully convinced, as well by numerous clinical observations of his own, in which the symptoms during life were compared with the morbid appearances presented upon dissection, as by repeated observations made by other physicians.

The views of the author in regard to the pathology, and his history of the symptomatology of the form of icterus of which the monograph before us treats, being somewhat novel, and those views, as well as his description of the disease being professedly based upon close and extensive observations made at the bedside of the sick, a short outline of them may not be unsatisfactory to our readers.

Icterus with yellow atrophy of the liver is characterized, according to our author, by an accumulation of bilious matter in the blood, and its separation from thence in some other than the normal manner; in consequence of which, a general yellow colouring of the several tissues and fluids is produced; by various disturbances of the digestive and assimilative processes; by pain and decreased volume of the liver; by an acute course, often attended by febrile symptoms, but without any determined duration, or crises, and, finally by the fatal termination being preceded by symptoms of exudation and colliquating, of irritation and softening of the brain, produced by the poisonous narcotic influence of the elements of the bile accumulated and retained in the blood, giving rise to delirium, convulsions, insensibility, paralysis and coma.

The constant anatomical characters of the disease are a change in the condition of the blood and the morbid phenomena from thence resulting; the shrunken state of the liver; the increased size and change of texture of the spleen, the hydrocephalic softening of the brain, and indications of colliquation and general relaxation of all the organs.

"The most important alteration is that of the blood—its plasticity being lost in consequence of a diminution of its fibrinous portion, it is in a fluid, softened condition; the small coagula occasionally formed in the cavities of the heart and larger blood-vessels, are soft and easily broken. Its colour is mostly of a dark-brown or a muddy dark-red, and it presents an excessive amount of the yellow pigment of the bile, which not being separated by the appropriate organ, the liver, accumulates in the blood. By the separation of this from the blood, by an abnormal process of secretion or by exosmosis merely, not only is the skin, the cellular texture beneath, and the fat contained in its areola, but, also, the various internal tissues, the parenchyma of the organs, the cartilages, bones, and even the substance of the nerves and muscles, stained of a yellow or some colour modified by yellow. That this colouring is not the result alone of a secretory process, but is caused also by exosmosis, is indicated by the fact, among others, of the yellow stain communicated to the inner coats of the arteries and veins.

"By chemical analysis the bilious matter is not detected merely in the blood and its citron-coloured serum, but also in the different secretions and excretions, in the urine, in the feces, in the saliva, the several mucous secretions, the serous exudations, in the pus of sores and abscesses, and even in the perspiration.

"The liver is contracted to one-half or even one-fourth its normal size. It is reduced in thickness, and its shape is flattened, so that it assumes an orbicular or cake-like form; its peritoneal covering is wrinkled; its substance devoid of blood, of a deep-yellow, greenish-yellow or dirty ochre colour; it is uncommonly flaccid and tough, though often it is easily torn; its granular texture is destroyed so that the different portions of the substance of the organ are no longer distinguishable. The gall-bladder is often contracted, its mucous coat infiltrated with serum, and containing a small quantity of slimy bile of a dirty-green or grayish-yellow colour.

"The spleen is for the most part, almost always indeed, increased in size, having often double or treble its normal volume; it is loaded with blood, but loose in texture, softened, easily torn and frequently reducible by a slight effort into a dark red pulp. It resembles closely that condition in which it is found in typhous and typhoid diseases, pyæmia, anomalous exanthematous efforts, and in drunkards.

"The brain is more generally anaemic than engorged, always infiltrated with serum and softened, often of a pulpy consistence, with more or less effusion of a yellow serum between the meninges and the brain, into the ventricles and at its basis.

"There is often found associated with the above described morbid appearances a colliquation of the mucous membrane, particularly of the stomach. It appears loosened in texture, and of a grayish-green, brownish or very dark-brown colour, often reduced to a soft easily removed pulp. The other coats of the stomach are

either in the same condition or of a pale dirty colour. The softened vessels contain a thick, black grumous blood.

"To the lesions constantly met with may be added the great enlargement and relaxation of the mesenteric glands, the relaxed and anaemic condition of the substance of the heart, the thyroid gland, pancreas, kidneys, uterus and ovaries. The general muscular system appears more or less soft, flaccid and anaemic.

"To the less constant and merely accidental lesions, appertains the passive stasis of the blood in the most depending portion of the lungs—in consequence of which their parenchyma becomes permeated with the thin dark-red, discoloured blood, and is no longer penetrated by the air, but has the denseness of the spleen, is brittle and easily torn. This hypostasis often gives rise to a true inflammatory process, which is indicated by the presence of some one of the products corresponding with the dyscrasia of the blood, and differing in the different stages of the disease. The upper portion of the lungs are, for the most part, anaemic, pale, and of a grayish-red colour.

"The inflammation of the pleura, peritoneum or other organs, occasionally met with, exhibits an evidently passive character; its products are less plastic than those of acute inflammation. In some cases there is met with an inflamed condition of the vena portarum, or some other of the venous trunks of the abdomen, with consecutive depositions of pus in the liver, lungs, or other organs.

"Organic changes of the liver and its appendages, as partial inflammation and abscesses, true hypertrophy, cirrhose and nutmeg degeneration, calculous concretions, melanotic or tuberculous infiltration; contraction or closure of the gall-ducts and gall-bladder, either by the presence of foreign bodies, or the result of disease or of the morbid condition of the neighbouring organs, which are the causes of the purely secondary choleric diseases, are seldom met with in cases of primary icterus.

"Various other morbid appearances are occasionally met with, which are altogether accidental and have no relation whatever with those produced by the existing dyscrasia of the blood; such as recent, red, softened, chalk-like tubercles, scirrhose and melanotic masses, hydatids, &c.—in the brain, lungs, kidneys, &c.; dilatation and contraction of the cavities of the heart, hypertrophy and atrophy of its substance, various degenerations of its valves, and defective formations of the large blood-vessels, (?) &c."

After this account of the anatomical characters of that form of jaundice which the author describes as invariably connected with yellow atrophy of the liver, we are presented with a history of the disease from its commencement to its close; a brief abstract of which it will be necessary to present that our readers may be able to arrive at correct views as to its diagnosis.

Dr. Horaczek divides the progress of the disease into two stages or grades. It may, when excited by some violent cause, attack suddenly, while under other circumstances it is developed gradually.

In the latter case the patient often complains for some weeks of a sense of debility and unconquerable depression, a sluggishness and aversion from his customary and cherished pursuits. He is affected with loss of appetite, particularly a disgust for animal food; nausea, constant eructations, which even when the tongue is clean cause a disagreeable taste in the mouth—there is not unfrequently vomiting of half digested food mixed with a bilious fluid, with a painful sensation at the epigastrium, which is distended and hard. The patient is troubled with flatulence—his bowels are irregular—no stools occurring for several days, and then repeated fluid stools take place unexpectedly. His sleep is disturbed by disagreeable painful dreams, or during many hours of the night the patient is wakeful. He experiences over the back a sense of cold or chilliness which alternates with flushes of heat, without, however, these sensations observing any periodic type. There is a depression of the spirits; the patient from an unaccountable feeling of internal suffering, becomes dejected, indifferent, restless, peevish and fretful. After a shorter or longer continuance of these symptoms the surface, which had early become of a dirty light yellow hue, acquires an intense yellow colour, and with this change in the tint of the skin, often with symptoms of a severe febrile reaction, the disease commences.

Whether the disease is preceded by the prodroma just described, or occurs suddenly, the symptoms of the fever of irritation are seldom absent, which in its

course but rarely transcends the bounds of *erythematic reaction*; when, however, such is the case the chill assumes the character of that observed in synoха. The irregular febrile exacerbations seldom assume any particular type. Nevertheless, when the patient is exposed to causes predisposing to an attack of intermittent, the paroxysms assume often the tertian or quotidian type. In general, however, frequently repeated exacerbations, differing in intensity, occur at irregular periods during the day, and particularly in the evening. The febrile excitement is usually ushered in by a slight transient chill, the heat is principally felt in the head—there very seldom occurs a severe chill followed by a continued dry heat of the surface; in many cases, indeed, these febrile movements are entirely absent, or occur only in a very slight degree.

But little heat of the surface or pain of the head is, for the most part, experienced—the skin is often moist, the thirst is but little increased, the tongue remains moist, the pulse is but little accelerated, full, neither hard nor contracted, but moderately strong. The exacerbations are marked by evident but irregular remissions, or rather intermissions; often after a few days no trace of fever is present; its termination is attended, however, by no critical discharges, nor are such observed throughout the whole course of the disease.

These erythematic febrile exacerbations frequently attend those cases in which the disease is gradually developed in young vigorous subjects, and in whom the nervous predominates over the sanguineous system, and still more frequently when the disease occurs suddenly in such individuals. In this latter case it is often ushered in by cramps and convulsions, and the accompanying fever assumes a higher grade of erythema, and may resemble in its character a synoха. It is then marked by long-continued and repeated chills, increased erectility of the organs generally, pain of the head, abdomen, and right hypochondrium, repeated painful vomiting, redness of the tongue and mouth, increased brightness of the eyes, quick respiration, diminution of the secretions and excretions, increased heat and dryness of all the surfaces, increased thirst, aversion to light and sound, and an accelerated, full, hard and contracted pulse.

² The reaction, even in such cases, very seldom, however, reaches to the true synochial grade, neither is the peculiar violence of reaction, nor the change in the blood—the decrease in its serosity and increase in its fibrin and haematosin—which characterizes the latter, observed; the blood which is discharged spontaneously or obtained by venesection exhibits a decreased plasticity, it seldom coagulates firmly, but separates into a large amount of a muddy, glutinous, yellow serum, and a soft, easily broken, thin, rough, opalescent, pseudo-fibrinous coagulum, which seldom, and only in the commencement of the disease, exhibits any buffy coat. The blood often coagulates into a uniform jelly-like bilious-looking mass, or remains of a thick glutinous consistence, colouring the coats of the vessels of a dark-red or brown colour. The febrile paroxysm has besides no determinate duration, although it is of longer duration generally than the simple erythematic reaction; nevertheless in a few days all febrile symptoms disappear, and the pulse becomes peculiarly slow, frequently beating but forty to sixty strokes in a minute. Occasionally, the fever does not go off, but continues to recur in an irregular manner and with a want of uniformity in its exacerbations, the pulse, during the entire course of the disease remaining tolerably full, contracted and quick; the fever declining with the decline of the general symptoms on the occurrence of a general perspiration, sedimentous urine, normal or pathological discharges of blood, &c.; or in the change of the disease into its second stage or higher grade, the febrile symptoms become amalgamated with the new phenomena which then present themselves."

When the disease occurs in individuals of a phlegmatic venous temperament or of a torpid, flaccid habit, or who have been debilitated by disease, deficient nourishment or other cause, the reaction in the commencement is slight. The energies of the system remain depressed; the pulse, if accelerated, is weak, soft and easily compressed; there is no tendency to crises; passive congestions take place, profuse hemorrhages occur, and with irregular, unequal exacerbations, a torpid form of fever becomes established.

The next most important symptom—which is in fact, the most constant and diagnostic,—is the excessive formation and accumulation in the blood of biliary matter, and the consequent morbid coloration of the tissues and fluids of the body.

The icteric colour of the surface commences gradually to form even before the full development of the disease; or when the attack commences with convulsive symptoms, it takes place in a few hours, in very different degrees, often however to a very intense degree. The yellow colour ordinarily shows itself first in the conjunctiva of the eyes, from whence it spreads, in succession, over the face and breast, trunk and limbs, so that, in a short time, the entire surface presents the same jaundiced hue. The colour of the skin varies from the brightest to the most intense yellow; often it has a dirty, greenish, bronze-like hue, and very often it exhibits a tint of red mixed with the yellow. In the commencement of the disease, or in the lower grades, the skin is of a light-gray or clear yellow, the colour becoming gradually deeper as the disease proceeds. The colour is always the most intense on the face, neck, breast, abdomen and inner surface of the limbs.

In the commencement of the attack the urine is of a dark red colour, and gradually changes to a dark brownish red, or the colour of a strong infusion of coffee, with often a shade of dirty green; it is more frequently clear and transparent than troubled and muddy. It frequently exhibits a slight amount of sediment of a dirty yellow, lateritious, brownish-red, or dark brown colour. It is disposed readily to putrefy, and the more so the more it is saturated and troubled. Portions of white linen or paper dipped in it are stained of a saffron colour.

The irregular discharges from the bowels—sometimes fluid, and at others of a pulpy consistence—are generally dark coloured; deep yellow, brownish yellow, or solid discharges of a brown, grayish, white, or clay colour, are more seldom observed than is generally supposed. The discharges are often tar-like, or similar to elder syrup. By the escape of the dissolved blood through the mucous membrane, dark coloured masses are often formed, and are found accumulated in the bowels after death.

In the higher grades of the disease, with a dry, harsh skin, there is often experienced an intense itching of the surface, which robs the patient frequently of his nightly rest. Occasionally all objects viewed by the patient, if white, appear yellow, and, if coloured, present a hue modified by yellow.

All the symptoms indicative of a disturbed state of the digestive organs, which marked the premonitory period of the disease, continue and often become increased after its onset. There are repeated vomitings during the first few days, of a watery slimy fluid of a deep or yellowish-green colour, and of a bitter acrid taste. There is often an increase of thirst, with a desire for cooling, acidulated, or even vinous drinks.

There is very generally considerable flatulence, and more or less of a painful sensation in the abdomen. The latter often consists merely of a feeling of distension, weight, and fullness of the epigastrium, with occasional paroxysms of sharp colicky pains about the navel; more frequently, however, the patient complains of continued pain in the region of the liver—this, in by far the greater number of cases, is experienced at the very commencement of the attack, and continues during its entire course. This pain, which is entirely nervous, is confined to one portion of the liver, particularly of the left lobe, and so circumscribed that the patient can himself indicate its boundaries. In the higher grades of the disease the abdomen is the seat of the most severe, cutting pains, either continued or occurring in paroxysms, and which no anodyne or position of body has the power to assuage. These pains are increased by pressure, causing the patient to scream out, and producing a contortion or convulsive motion of his features. They are seldom attended by meteorism of the abdomen, which, on the contrary, by the contraction of the abdominal muscles, is more generally retracted.

The pain of the abdomen is intimately connected with the progress of atrophy in the liver, with the increase of which it augments in intensity. The decrease in the size of the liver can be easily detected in the higher grades of the disease, by palpation and percussion of the abdomen. By close attention, and repeating the examination daily, even in the lighter grades, it is possible, we are told, to detect the atrophy of the liver, by the dull sound which the liver gives upon percussion, which is usually heard over a space for about two inches from the left, and two and a half from the right side of the xiphoid cartilage, three inches below the nipple, and four inches below the axilla, becoming weaker and more and more confined within these limits. In the higher grades of the disease, when

the liver has become reduced in thickness, the dull sound is scarcely to be detected at all, particularly when the intestines are distended with gas.

The augmentation in the size of the spleen may readily be detected by palpation and percussion; it is attended, also, with a sense of weight and tenderness of the left hypochondrium; and in the higher grades of the disease often gives rise to hemorrhages from the nose, bowels, &c.

The disease is attended throughout by the same sense of debility and lassitude, the same morbid sensibility of the external senses, the same depression of mind, and fretfulness, and irritability of temper, which marked its premonitory stage. The patient has a peculiar suffering expression of countenance, the brows are contracted and depressed, the forehead wrinkled, the eyes half closed, while the half open mouth has an expression somewhat resembling the risus sardonicus. The angles of the mouth and eyelids have often a tremulous convulsive movement.

"The foregoing symptoms continuing, and gradually augmenting in violence, the strength of the patient finally begins to sink—he is affected with a general apathy, a kind of paralysis of the power of the muscles; there are diminished strength, and an increased frequency of the pulse, a complete change in all the secretions and excretions, and a gradual coming on of a complete comatose state, or there suddenly occur cephalico-nervous symptoms, as inordinate restlessness, delirium, and tonic and clonic spasms. These phenomena announce the occurrence of the second stage, or that of the complete hypertrophy of the liver.

"In the larger number of cases this stage commences with coma, which ensues either suddenly, and arrives quickly at its height, or comes gradually on—the patient complaining at first of excessive lassitude and sluggishness, a leaden weight of the limbs, heaviness and oppression of the head, and an almost irresistible inclination to sleep. There is at the same time a return of the nausea and vomiting. When the patient is aroused from his lethargic, stupid condition, it is with difficulty, and only by degrees that entire consciousness is restored. On opening his eyes the pupils are found to be greatly dilated and somewhat insensible to light; he gives slow, often irrelevant answers, with a stammering tongue, to the questions put to him; he murmurs unintelligible words to himself, and falls soon again into a state of quiet muttering delirium, or into a deep sleep, which is seldom broken excepting by momentary startings. This stage of the disease is often marked by a disturbance of motility, followed in a short time by a comatose paralytic condition, in which there are complete unconsciousness and entire loss of all volition. Involuntary discharges now take place from the bowels and bladder—there is a complete prostration of strength, the temperature of the surface often rises, and the skin often becomes bathed in a copious viscid perspiration, the pulse becomes very slow, small, weak, and vibrating, and death soon ensues.

A very common symptom preceding the occurrence of the comatose condition, is frequent unexpected paroxysms of delirium. The patient, sometimes, after long continued watchfulness, and often suddenly, is seized with distortion of visage, and, with half closed eyes, throws himself about, and talks incessantly, screaming and ranting—complains of pain in the region of the liver, is averse to light, attempts frequently to escape from his attendants; but destitute of the morbid strength which accompanies the delirium of phrenitis, he is without difficulty controlled. The delirium is seldom attended by a proportionate irritation of the blood-vessels and general turgescence. The skin, although warm, is soft and moist, the head of only moderate warmth, the eyes are little or not at all reddened, there is seldom any pulsation of the carotids, and the pulse at the wrist, although frequent, is without strength. The delirium is marked by remissions of short duration, during which the patient has a disturbed sleep. The delirium is often succeeded by convulsions, or the patient falls into a comatose condition.

A less constant symptom is cramp. In many cases there is merely a tremulous motion of the face, in others the muscles of the eyes, jaws, neck, throat, breast, abdomen and extremities, particularly the upper, are affected with severe tonic and clonic spasms, which are repeated at irregular short intervals, until finally, the organism is exhausted and the patient falls into a state of coma.

After a minute description of the symptoms and progress of the disease, the author proceeds to consider its combinations—1st, with infiltration and softening of

the mucous coat of the stomach and duodenum, attended with repeated, painless vomiting of a fluid of a dark brown colour, or resembling turbid coffee or coffee grounds—a similar softening of the uterine mucous membrane occurs in pregnant and puerperal females, especially when powerful abortive remedies have been employed; 2d, with delirium tremens in drunkards; 3d, with typhoid or dysenteric symptoms; 4th, with various eruptions of the skin; 5th, with various internal inflammations; 6th, with hysteria, hypochondriasis, epilepsy, and with neuralgia of the ganglionic nerves, and hence with intermittent fever; 7th, with hemorrhages; 8th, "one of the most formidable combinations of the bilious dyscrasia," remarks Dr. H., "is that with the phlebitis of the abdominal veins; of this latter the dyscrasia of the blood and the rapid atrophy of the liver may be considered as the exciting cause. Dr. H. considers it probable that the inflammation of the vein may be caused by a partial thickening or coagulation of the blood, the presence of which produces a reaction in the neighbouring tissues of the vessels, and a plastic exudation by which its calibre is closed; the exudation being gradually converted into pus by the reaction of the system, against the noxious effects of which we have the symptoms of phlebitis added to those of the preceding icteric disease."

The idiopathic bilious dyscrasia is most liable to occur, according to our author, in young persons; it is seldom observed before puberty or after the 50th year. Both sexes are equally liable to it—though more females than males, below the middle term of life are attacked, and more males than females after that term. No constitution affords immunity against the disease. Individuals, however, of a nervous, irritable temperament, of a venous, or, as it is termed, an atrabilious constitution, as well as those of an ardent, flighty, dark bilious temperament are most liable to its attacks. There is in certain families a hereditary predisposition to the disease. Preceding as well as existing general diseases which depress the nervous power and diminish the blood; particularly, those diseases attended by fluid discharges, or imperfect hematosis, or general anaemia, chlorosis, dysenteric affections, &c.; repeated losses of blood, the mercurial cachexia, poisoning with lead, sudden suppression of normal or habitual pathological discharges, and the various nervous affections, may be ranked among the causes as well predisposing as exciting, of the bilious dyscrasia, as may also the abuse of emetics, drastic purgatives, abortives, mercury, &c.

"The close of summer and autumn appear more favourable to the occurrence of the bilious dyscrasia than the other periods of the year; it is favoured, also, by long-continued, warm, damp weather, with diminished electricity of the air, by an atmosphere loaded with organic emanations, and by sudden changes of atmospheric temperature. By the latter, an epidemic occurrence of icterus may even be produced. The disease is, also, endemic in certain localities."

Among the circumstances which predispose to an attack of the bilious dyscrasia, are, Dr. H. enumerates, inattention to appropriate and comfortable clothing—rioting at night—irregularity in respect to sleep, sleeping in the open air, exposure to wet, sudden suppression of perspiration, uncleanliness of person, the abuse of strong fermented drinks, and unwholesome, stimulating, fat, crude or tainted food; violent fits of anger—terror—long-continued grief—disgust—silent brooding anger or grief; blows upon the epigastrium and right hypochondrium, or upon the head, sudden concussions from falls, injuries of the brain, or of many nervous trunks or branches, and the bites of certain serpents, or of an enraged animal.

That the morbid phenomena described by Dr. H. as those indicative of a primary diseased condition of the blood, from an increased formation and accumulation in the circulating fluid of the materials of bile, and accompanied invariably by a peculiar form of atrophy of the liver, are of frequent occurrence, there can be no doubt. The correctness of the author's views in respect to the pathological cause of the phenomena referred to—whether they are in fact the result of a primary disturbance in the function of hematosis, or whether, on the contrary, the dyscrasia of the blood as well as many of the morbid phenomena referred to it, may not be the result of local disease, either of the liver or of the alimentary canal—and whether, hence, the symptoms he describes as those characterizing a single pathological affection are not rather the secondary results of various diseases, differing in character and location, must be determined by the results of future and more extended observations.

The monograph of Dr. H. is a very interesting one, and affords matter worthy the consideration of the pathologist.

In an appendix the history of 21 cases, detailed by the author or selected from various sources, from Morgagni, Andral, Dance, Aldis, Heyselder, Löschner, Schölein, Scherer, &c.,—are given in illustration of the views advanced in the body of the work.

D. F. C.

ART. XIX.—1. Reports of the Board of Visitors, and Trustees, and of the Superintendent of the New Hampshire Asylum for the Insane. Concord: 1845, pp. 24.

2. Report of the Maryland Hospital for the year 1844. Baltimore: 1845, pp. 18.

1. THE State Asylum for the Insane, in New Hampshire, appears to be in a flourishing condition. During the past year its accommodations have been increased by the erection of a building for the violent and noisy patients. "It is a well-constructed edifice," says the report of Dr. Chandler, "two stories high, with eight rooms for patients on each story, besides a room for the nurse in the second story. The rooms on the lower story are warmed by furnaces, and by the smoke pipes passing under the stone floors. By these means they can at all times be sufficiently warmed for those patients who will not wear sufficient clothing for that purpose. In addition to this, a current of heated air is thrown into the spaces in front of the rooms in each story, and then passes off through the rooms, by ventilating openings, to the attic. By these means the apartments have been kept at a proper temperature, and have been pretty well ventilated."

			Males.	Females.	Total.
Patients in the Asylum, May 31, 1844	-	-	33	37	70
" admitted during the year	-	-	42	46	88
Whole number during the year	-	-	75	83	158
Discharged and died "	-	-	36	46	82
Remaining, May 31, 1845	-	-	39	37	76
Discharged cured	-	-	22	15	37
Died	-	-	2	4	6
Whole number of patients since the asylum opened, Oct. 29, 1842	129		139		268
" " " discharged cured	-	-	49	37	86

The various means included under the head of *moral treatment*, particularly manual labour, the most important of them all, appear to be brought into extensive use, with the same satisfactory results which have attended their introduction into other institutions for the insane.

2. From the report of Dr. Fisher, of the Maryland Hospital, we extract the following judicious remarks upon the subject of mechanical restraints upon the limbs of the insane:—

"With respect to corporeal restraints, we have to say that we are not yet prepared to give them up entirely; the mildest forms only are used, but never unless directed by the physician. With us they are never resorted to as a punishment, but merely as a necessary means to prevent the patient doing mischief; and of this we endeavour to make him sensible. We recollect no instance during the last year, in which more than two out of the whole number of inmates were at any one time subjected to such restraints. Possibly we might have dispensed with them altogether, did we not believe that the welfare of the patients would be better promoted by their judicious use. The leather muff, mittens, and straps, are the only apparatus employed; and they are always laid aside as soon as the condition which called for their use ceases. It has been remarked that the degree in which personal restraint is required, depends very much upon the character of the attendants—that many paroxysms of excitement, or acts of violence, which appear to justify restraint, would be prevented by a little kind consideration and judgment. There are many ways which can hardly be specified, by which an attendant may provoke a patient: nor are the arts by which an irritable, excitable mind is soothed, more easy of description. Certain it is, that the restriction of the power of attend-

ants, and their being prohibited the employment of personal restraint, without the consent of the superintendent, has a tendency to lead to the cultivation of the arts of prevention; and it may now be considered as established, that, under fair management, the number of patients subjected to any kind of mechanical restraint, either by day or night, will rarely exceed two or three out of a hundred; and sometimes no one out of this number will be found to require it."

			Males.	Females.	Total.
Number of patients in the Hospital, Jan. 1, 1844	-	-	45	36	81
" " " admitted during the year	-	-	54	21	75
Whole number admitted during the year	-	-	99	57	156
Remaining at the end of the year	-	-	52	35	87

"Of the 156 cases under treatment, 13 were cases of mania à potu. These all recovered; two of them remain in the house."

Cases of insanity, discharged cured	-	-	24	15	39
" " " died	-	-	5	2	7
<i>Causes of death.</i> —Phthisis pulmonalis, 2; cerebral congestion, 2; paralysis, 2; marasmus, 1.					
Whole number of patients under treatment during seven years	-	-			553
Of these were cured	-	-			265
Died	-	-			43

The moral management of the patients in this hospital appears to correspond with that of most other institutions which are conducted upon the enlightened principles of true medical science. It is to be wished that there were some word in the title of the Maryland Hospital which would designate the specific object to which it is devoted.

P. E.

ART. XX.—*Elementary Chemistry, Theoretical and Practical.* By GEORGE FOWNES, Ph. D.; Chemical Lecturer to the Middlesex Hospital Medical School, and to the Pharmaceutical Society of Great Britain. With numerous illustrations. Edited, with additions, by ROBERT BRIDGES, M. D., Professor of General Pharmaceutical Chemistry in the Philadelphia College of Pharmacy. Philadelphia: Lea & Blanchard, 1845.

JUDGING from the innumerable failures, it would appear that there are few tasks more difficult of execution than to prepare an elementary work on chemistry,—one so simple and clear in its elucidations of the leading principles of the science as to be understood by the beginner, and which, at the same time, so far develops and explains the more intricate portions of the science, as to be an exponent and guide to the student at a more advanced stage of his progress. Year after year we are presented with new compilations to serve as text books in this department of learning, but hitherto nothing has issued from the press that fulfils the desired end; the general complaint of all teachers has been, that they are either obliged to place in the hands of their pupils, works so purely elementary as to be only fitted for the capacities of children, or else ponderous and abstruse volumes requiring an advanced stage of knowledge to be understood and appreciated. When a work has come forth, in some degree answering the purpose, and of course immediately sought for with avidity, the author or compiler, anxious to improve it, has, at every subsequent edition, altered and added to it, till he has made it totally unlike what he first intended, and wholly destroyed its usefulness as a text book. It is true, that the almost daily discoveries in chemistry require that large and important additions should be made, but unfortunately these are seldom done in the spirit and tone of the original context, and hence the student is disheartened at every stage of his progress by meeting with facts and theories, which are wholly unintelligible to him from a want of that knowledge, which the writer appears to think must be intuitive, as he affords him no clue to enable him to extricate himself from his difficulties.

So general have been these failures, that we had abandoned all hope of seeing a work, combining the desired requisites of a clear exposition of the first principles

of the science with such a succinct sketch of its complicated details as would enable the student to obtain an acquaintance with them which would be practically useful to him in his profession. It is idle to expect more, all that he can learn during an attendance on lectures is a general knowledge of the great and leading facts, and their bearings on the more immediate objects of his attention, the treatment or prevention of disease. When it is wished to advance further, it must be done in the laboratory, and each process and theory tested by his own individual labour and experience.

The work now before us combines in an admirable manner the qualities alluded to:—it is concise and yet clear and perspicuous, and, in addition to giving the great and leading principles of the science, embodies the latest discoveries in sufficient detail to enable the student to understand their importance and bearings. To use his own words, “it offers, in a compact and inexpensive, but, it is hoped, not unintelligible form, an outline of the general principles of chemical science, and a history of the more important among the very numerous bodies which chemical investigations have made known to us. The work has no pretensions to be considered a complete treatise on the subject, but is intended to serve as an introduction to the larger and more comprehensive works.”

The author has fully accomplished his design, and we know of no treatise in the language so well calculated to aid the student in becoming familiar with the numerous facts in the intricate science on which it treats, or one better calculated as a text book for those attending chemical lectures. It is eminently practical in its details, and its value is much enhanced by the numerous wood cuts, exhibiting the most useful forms of apparatus, with their adjustments and methods of use. The work has been carefully revised by its able American editor, and much interesting matter added by him. After what we have said, it is almost superfluous to add that we cannot too highly recommend this work to the attention both of teachers and students, as the best text book on chemistry that has issued from our press.

R. E. G.

ART. XXI.—*The Medical Remembrancer, or Book of Emergencies; in which are concisely pointed out the immediate remedies to be adopted in the first moments of danger from poisoning, drowning, apoplexy, burns, and other accidents; with the tests for the principal poisons, and other useful information.* By EDWARD B. L. SHAW, M.R.C.S., and L.A.S., &c., &c. Revised and improved by an American Physician. “In doceti discant et ament meminisse periti.” 18mo. pp. 112. New York: 1845, S. S. & W. Wood.

THE nature and contents of this “book of emergencies” are very fully set forth in the title. That all it contains, but particularly the directions for the management of cases of poisoning, drowning, apoplexy, burns, &c., is deserving of remembrance by every practitioner of medicine, cannot be doubted, but whether that remembrance can be so certainly effected, when these directions are “written down in a book” to be “carried in the pocket” and consulted just when the emergency occurs for their immediate adoption, will admit of a question. That this is the use for which the volume before us was intended by its author, is evident from what he states in his preface.

“The want,” he remarks, “has been long felt amongst the junior members of the profession, of some practical guide *in cases of sudden emergency*, which should be at once so portable as to admit of being conveniently carried in the pocket, and so concise as to present *at a glance*, the most appropriate remedy for the case, unincumbered with other matters, which, however valuable in themselves, tend only, *in the first moments of alarm and confusion*, to distract the attention from the object of primary importance.”

Now, no one, we should say, is competent to prescribe, even “in the first moments of danger from poisoning, &c.,” who, before he gives his directions is under the necessity of consulting his “portable pocket remembrancer” for that information, which every well-instructed “junior member” of the profession should possess in his mind rather than in his pocket. And then, it is only in cases where

the character of the poison taken, or the nature of the accident to which he is called, is known, that the present "book of emergencies" can afford any guide as to the means to be immediately pursued; for the author, to prevent the attention of those for whom the book is to become a "medical remembrancer," being distracted "*from the object of primary importance,*" has omitted the diagnostic symptoms of the several kinds of poisoning, "because," he remarks, "there occur very few cases in which any doubt exists as to the particular agent the symptoms have been occasioned by."

According to our own experience, the doubtful cases are of very frequent occurrence, especially in instances of attempted suicide or murder; but, if only few in number, they may be those to which the practitioner with his pocket remembrancer, may, perchance, be called, and a life may be sacrificed by the silence of his book of emergencies as to the means of determining the nature of the poison, to expel, neutralize, or counteract which, his remedies are to be directed.

There is no more difficulty in acquiring that species of knowledge which will enable the practitioner when called to a case of poisoning, drowning, apoplexy, or other accident, to act with promptness and efficiency, than in acquiring any other branch of medical knowledge. And when once this knowledge is acquired in the right manner, no case of sudden emergency can occur, in which reference to a work like that before us, can be required, and even for the use of the student we possess many far better calculated to afford him that species of instruction which shall serve him on all occasions, even when promptness as well as correctness of action is essential to success.

D. F. C.

ART. XXII.—*An Essay on the Treatment of Compound and Complicated Fractures, being the Annual Address before the Massachusetts Medical Society.* By WILLIAM J. WALKER, M. D., Fellow of the Society. Boston, 1845: pp. 45, 8vo.

THE subject chosen by Dr. Walker for his address is one of great interest, and the rules laid down by him for the treatment of the important class of injuries of which it treats, will be found safe and judicious; his views being illustrated by cases either original, or selected from standard authorities. The cases adduced from his own practice are well calculated to show the powers of nature in healing fractures attended with serious injuries to the soft parts, and loss of substance of the bones, though it is worthy of observation, that three out of the six given by him, occurred in patients below the age of ten; a period of life which is well known to be peculiarly favourable to recovery from accidents of apparently the most desperate kind. The question of amputation in compound fractures is pretty fully treated of, and like others that have gone before him, Dr. Walker concludes, that to decide upon the cases definitely, requires something more than a mere knowledge of the rules laid down by systematic writers. Boyer well observes, "c'est à la sagacité du chirurgien à décider la nécessité de l'amputation." The greatest possible caution is justly urged by Dr. W. in recommending amputation after compound fractures. We fully agree with him in thinking that too much care cannot be taken in determining upon the cases requiring it. Notwithstanding this, however, and the truth admitted by all, that to save one limb is infinitely more honourable to the surgeon than to have performed numerous successful amputations, still the quaint remark "that it is better to live with three limbs than die with four," must never be forgotten.

G. W. N.

ART. XXIII.—*The Anatomy and Diseases of the Breast, with numerous plates.* By SIR ASTLEY COOPER, Bart. To which are added his various Surgical Papers. Philadelphia, Lea & Blanchard, 1845: super-royal 8vo.

THIS volume completes the valuable series of the works of Sir Astley Cooper, commenced sometime since by the publishers, and in form and style is similar to those which have preceded it. The care and accuracy with which the investiga-

tions into the anatomy of the Breast were made by the author, and the vast experience embodied in the treatise on the diseases of that important organ, must ever make them valuable to the anatomist and practical surgeon. The various surgical papers added to the volume, and which are now first published in a collected form, contain much that is interesting and important.

ART. XXIV.—*Lectures on the Principles and Practice of Physic; delivered at King's College, London.* By THOMAS WATSON, M. D., F. R. C. P., &c. &c. &c. Second American, from the second London Edition. Revised with additions, by D. FRANCIS CONDIE, M. D., Secretary Coll. Phys., &c. &c. Philadelphia, Lea & Blanchard, 1845: 8vo. pp. 1060.

THIS work being now confessedly, by the concurrent opinions of the highest critical authorities both of Great Britain and this country, the best compend of the principles and practice of physic that has yet appeared, and our own estimate of it having already been fully expressed, (No. for Jan., 1844, p. 182,) it would be supererogatory to say anything further in its praise. We cannot, however, allow the present edition to go forth without calling attention to it. It is enriched by some extremely useful additions by Dr. Condie, relating to the diseases of this country, and is got up in a style very superior to the preceding one.

ART. XXV.—*The Principles and Practice of Obstetric Medicine and Surgery, in reference to the Process of Parturition.* Illustrated by 148 figures. By FRANCIS H. RAMSBOTHAM, M. D., F. R. C. P., Lecturer on Obstetric and Forensic Medicine, at the London Hospital, &c. &c. &c. A new edition from the enlarged and revised London edition. Philadelphia, Lea & Blanchard, 1845: super-royal 8vo. pp. 519.

THE very flattering reception which this work received, on its first appearance, both from the medical press and from the profession, induced the author in preparing the present edition to considerably extend it, with the hope of rendering it more useful to the student, for whose guidance it was more particularly designed. With this view, besides alterations and additions to the original text, he has added a very interesting essay on the diseases of the pregnant and puerperal states, and on the important subject of abortion; some statistical tables, &c., and several additional illustrations.

Prof. Hodge, of the University of Pennsylvania, in a letter prefixed to this edition, very justly speaks of it as "the standard work on midwifery," and as being "most valuable,—from its intrinsic, undoubted excellence, and as being the best authorized exponent of British midwifery."

In all that constitutes the value of such a work to the student, clearness and perspicuity of language, happy arrangement, and accuracy and copiousness of illustration, this seems to leave little to be desired.

ART. XXVI.—*Outlines of the Arteries: with short Descriptions. Designed for the use of Medical Students.* By JOHN NEILL, A. M., M. D., Prosector in the University of Pennsylvania, Physician to Wills Hospital, Lecturer on Anat., &c. Philadelphia, Ed. Barrington and Geo. D. Haswell, 1845: 8vo. pp. 30. Plates vi.

THIS work is so admirably adapted to the wants of students commencing the study of arteries, that it cannot fail to obtain a favourable reception. The main arterial trunks are represented, omitting the minute ramifications which so constantly confuse the student, and "to avoid the tediousness of references, the names have been placed upon the arterial trunks, so that the position of the vessel and its name strike the eye at the same time."

The drawings are very distinct and well-coloured. The idea of this work was a happy one, and we trust, for the benefit of students, that the author will extend it to the veins, nerves, &c.

ART. XXVII.—*The Domestic Management of the Sick-Room, necessary, in aid of Medical Treatment, for the cure of Diseases.* By ANTHONY TODD THOMPSON, M. D.; F. L. S., &c. &c. First American from the second London Edition. Revised, with additions by R. E. GRIFFITH, M. D. Philadelphia, Lea & Blanchard, 1845: pp. 353, 12mo.

THIS work is addressed rather to the public than to the profession; we are inclined, nevertheless, to believe, that it is better adapted for the instruction of the student and junior practitioner, than of the nurse or ordinary attendant. There are numerous minutiae relative to the management of the sick room, attention to which is not only necessary to the comfort of the patient, but often essential to the successful treatment of the case; and yet in regard to which our professed treatises are wholly silent, and the practitioner gains a knowledge of them, only after a long experience and too often at the cost of his patient.

Dr. Thompson very justly remarks, “The most judicious plan of medical management may be devised, and the plainest directions for its fulfilment may be delivered to the attendants of the sick room; but without more information on the subject than is at present possessed by the females of a household, and especially by those whose duty it is to superintend the execution of the orders of the physician, little benefit can be anticipated to the invalid.”

We commend this volume to the student and young practitioner as one furnishing him information of great importance, not only to his patient but also to himself, for an ignorance of the details of the management of the sick and inability to give the necessary instructions may subject him to remarks on the part of the nurse calculated to impair or even destroy confidence in his professional skill.

ART. XXVIII.—*Manual of Orthopedic Surgery; being a Dissertation which obtained the Boylston Prize for 1844, on the following question: “In what cases and to what extent is the Division of Muscles, Tendons, or other parts proper for the relief of Deformity or Lameness?”* By HENRY JACOB BIGELOW, M. D. Boston, William. D. Ticknor & Co., 1845: pp. 211, 8vo. Plates vi.

In this well-written dissertation, we are presented with an excellent exposition of the doctrines and practice of the leading French Orthopedists. The operations which they perform, and the procedures employed by them are fully and faithfully described, and the instruments and apparatus used, are accurately figured.

We cheerfully commend it to the attention of those interested in this branch of surgery.

We must, however, express our regret that the author has scarcely alluded to the achievements of his own countrymen in this department; and our surprise at the remark he makes in his preface that “it does not appear that we have any right to question the accuracy of” M. Guerin’s “statements,” but “that on the contrary, we may infer from the last report of the committee appointed by the Academy of Medicine to investigate this point, that there is no ground for supposing the evidence in any way warped or misrepresented.” Certainly such were not our inferences from reading the report.

SUMMARY
OF THE
IMPROVEMENTS AND DISCOVERIES
IN THE
MEDICAL SCIENCES.

ANATOMY AND PHYSIOLOGY.

1. *Chemical Phenomena of Digestion.*—MM. BERNARD, de Villefranche, and BARRESWILL, have recently addressed a second communication* on this subject to the French Academy, in which they observe, “We formerly stated that the gastric juice contains two active principles, 1^o free lactic acid, 2^o an organic matter, which is precipitated and destroyed by a heat of 85°, or 90° cent. It is the presence of this organic matter which gives the gastric juice its digestive power, since it loses this power when the said matter is destroyed by an elevated temperature.

“One of the remarkable properties of this organic matter is, that its digestive powers vary, according as it is associated with a fluid having an acid or an alkaline reaction. Thus, in the gastric juice, which is acid, it readily dissolves (as is well known), azotized substances, fibrin, gluten, albumen, &c., whilst it is altogether without action on starch.

“The object of the present paper is to show, that if we destroy this acid reaction of gastric juice, and render it alkaline by the addition of carbonate of soda, its active organic matter being now in presence of an alkaline fluid, changes its physiological action, and becomes able rapidly to modify starch, whilst it loses its power of digesting meat and azotized substances. As the latter is exactly the character of saliva and the pancreatic fluid, it was interesting to know whether a change in the chemical reaction of these two fluids would produce in them the same change of properties as in the gastric juice. Our experience has demonstrated that it does so. If we render the pancreatic fluid, or the saliva, (which are both naturally alkaline,) acid, we invert their ordinary action, and give them the power of dissolving meat and azotized substances, whilst they lose their influence upon starch.

“The numerous and varied experiments related in this memoir fully support these assertions, and prove, that in the gastric juice, the pancreatic fluid, and the saliva, exists an organic principle, an active agent of digestion, which is common to all of them, and that it is the nature of the chemical reaction associated with it, which alone determines their power of digesting the different alimentary principles.

“In an alkaline fluid, all three have the power of transforming starch, and do not digest meat, whilst in an acid fluid they dissolve meat, but do not act upon starch. Thus, it appears easy to transform these fluids into each other, and to make an artificial gastric juice from the pancreatic fluid, and *vice versa*. The action of saliva, however, is less energetic, whether on meat or starch, than the pancreatic juice.”

—*Comptes Rendus*, July 7.

2. *Observations and Experiments on the rapidity of the passage of some foreign substances through the kidneys.*—Mr. ERICHSEN, in a late number of the *Medical Gazette*, gives the particulars of an interesting case of extroversion of the bladder, and

* For notice of first, see No. of this Journal for April, 1845, p. 445.

details the results of some experiments made by him upon several points connected with the excretion of the urine.

The subject of this malformation was a boy of thirteen years of age. Immediately above the symphysis pubis, the abdominal parietes and anterior portion of the bladder were deficient to an extent of about three inches in an horizontal, by two in a vertical direction. The inner surface of the posterior aspect of the bladder protrudes through this opening, and forms a tumour about the size of half a large orange, which has a scarlet colour, is very sensitive to the touch, and is covered by a viscid glairy mucus, which has an alkaline reaction. The orifices of the ureters are seen at the under surface of the tumour on either side; they appear when closed to be small, irregularly oval depressions, about a line in diameter, situated on the summit of a conical papilla; a probe may be passed upwards in them for several inches without any sensible inconvenience.

The mechanism of the passage of the urine from the ureter to the bladder, as observed by Mr. Erichsen, was as follows: A drop collects within the papillary termination of the ureter, which becomes somewhat distended; the orifice of the canal then opens to an extent of from one to three lines, and as soon as the drop of urine passes, it contracts with a sphincter-like action. When the patient had not taken any food or drink for twelve or thirteen hours, each ureter opened on an average three times in a minute; the two ureters do not open at the same time, but with an irregular alternating action, and the action of the same ureter is sometimes very irregular. The effect of posture was very marked; when the patient lay upon his back the urine did not escape for a considerable time, and then dribbled out in a slow and gentle manner, without so distinct an opening and shutting of the orifices of the ureters as when in the upright position. On assuming the erect posture, after lying down for some time, the urine flows in a full stream, until the ureters have emptied themselves of the quantity that had collected in them. During a deep inspiration, as in yawning or coughing, or while straining at stool, the flow of urine is suddenly increased, and it then escapes in a small stream, or in several large drops, in rapid succession. The urine was invariably acid.

In order to determine the length of time which intervenes between the introduction of certain substances into the stomach and their appearance in the urine, (as this was a very favourable subject for such an inquiry,) Mr. Erichsen administered several drugs which are readily detected by appropriate tests, as the ferrocyanuret of potash, infusion of galls, rhubarb, madder, uva ursi, and logwood, the citrates of soda and potash, the tartrate of soda, and the acetate of potash. The experiments with prussiate of potash, infusion of galls, and uva ursi, were made by receiving the urine as it dropped from the ureter into a vessel containing a solution of persulphate of iron; with rhubarb, into a dilute solution of potass; and those with citrates, tartrates, and acetates of potash, by testing the urine at regular intervals with litmus or turmeric paper.

Mr. Erichsen gives the details of ten experiments with the prussiate of potash, and adds a tabular view, showing the quantity taken of the salt, the period which intervened before it made its appearance in the urine, &c., &c. The dose never exceeded forty grains, nor was below twenty; the earliest period at which it was detected in the urine was about one minute after being swallowed, and the longest thirty-nine minutes: this difference appeared to depend upon the presence or absence of food in the stomach at the time; when the stomach was empty, the salt was detected in from one to two and a half minutes, whereas soon after a meal it required periods varying from six and a half to thirty-nine minutes.—*Dublin Medical Press*, July 9, 1845.

3. *Negative Influence of the Cerebro-Spinal fluid on Locomotion.*—M. LONGET communicated to the French Academy of Sciences, June 16th last, a notice of some experiments relative to the abstraction of the cerebro-spinal liquid and the influence of the posterior cervical muscles on locomotion, by which he proposed to point out an error and to establish a fact. It is generally admitted by physiologists for twenty years past, that the evacuation of the cerebro-spinal fluid disturbs locomotion very remarkably. The method pursued to evacuate the cerebro-spinal liquid has been to open the dura mater and the arachnoid, between the occipital

bone and the atlas, after having divided the soft parts covering the occipito-atloid space. When the liquid is evacuated, and the animal is let loose, it staggers, it is said, as though it were intoxicated. M. Longet divided the soft parts down to the occipito-atloid ligament, which latter structure was left intact, *and consequently without evacuating the cerebro-spinal fluid*, in the horse, the dog, and the rabbit, the animals were placed in the horizontal position, and to M. Longet's astonishment, he observed precisely the same disturbance of the functions of locomotion, the same unsteadiness in walking which had hitherto been always attributed to the abstraction of the cerebro-spinal fluid. A counter experiment, by evacuating the cerebro-spinal fluid without dividing the muscular and ligamentous tissues of the back of the neck, was necessary to test this result. M. Longet removed one of the vertebral laminæ in the middle of the dorsal region. After the operation there was some weakness in the posterior extremities, in consequence of the muscular wound, but this weakness was in no degree increased by the evacuation of the fluid, and moreover the animals did not present any of the peculiar and very characteristic staggering observed in the other series of experiments in which the soft parts of the back of the neck were divided.

M. Longet concludes from these experiments—1. That an important influence over the functions of locomotion has been erroneously attributed to the cerebro-spinal fluid, which, in point of fact, exerts no such influence. 2. That the division of the muscles and ligamentous tissues of the nucha causes animals to stagger as though they were drunk; and that the effects attributed by previous experimenters to the abstraction of the cerebro-spinal fluid arose from the division of those parts.—*Gaz. Méd. de Paris.*

4. Cases of Congenital Fissure in the Neck.—Prof. ALLEN THOMSON read to the *Medico-Chirurgical Society of Edinburgh* (July 8, 1845), a notice of three cases of congenital fissure in the side of the neck, of the same nature as those described by Dr. Aschersohn of Berlin, in his Inaugural Dissertation, published in 1832.

Dr. Thomson began his communication with an account of the general results of Aschersohn's observations on eleven cases, and an explanation of the manner in which that author, and after him, embryologists in general, have referred the congenital fissures in question, to the abnormal patency of one or more of the bronchial clefts discovered in the vertebrated embryo by Rathk, in 1825.

Dr. Thomson then detailed the history of the three cases which had come to his knowledge in Edinburgh. Of these cases, one had been observed by himself, five years ago, along with Professor Syme and Dr. Thomas Fairbairn; a second was now under treatment for the affection by Dr. Gairdner, President of the Society; and a third had been casually noticed by Dr. James Duncan.

The first of these cases now referred to is that of a young man of seventeen, now residing in Edinburgh, presenting a marked example of the fissure on the right side of the neck. The external aperture of the fissure is situated in the skin covering the anterior border of the sterno-mastoid muscle, and about midway between the jaw and clavicle. A common surgeon's probe may be passed about half an inch into the fissure; but a thinner probe runs, without more than the slightest possible force being applied, to the distance of nearly two inches in a direction upwards below the skin, platysma myoides, and fascia, towards the pharynx or great cornu of the hyoid bone.

Four years ago, when the case was first carefully observed, the probe was passed very easily to the depth of two and a-half inches in the same direction. Upon one occasion, when the probe was passed the length now stated, the young man thought he felt matter pass into the throat; and upon all occasions, when the probe is passed to a considerable depth, a tickling cough follows—circumstances which, as in some of Aschersohn's cases, lead to the view, that the fissure is connected with the pharynx. It may also be mentioned, that on pinching up the skin near the external aperture with the fingers, a cord-like prolongation is felt in the direction in which the probe passes; and that when the lad swallows, the skin immediately surrounding the external aperture is drawn up and slightly puckered.

The external aperture is frequently closed by a scale or scab; but at other times, a glairy fluid exudes from it, and a long gelatinous thread may occasionally be pressed out of the fissure.

The existence of the aperture was noticed by the parents of this lad a few weeks after his birth, and in the interval of four years between the separate observations made by Dr. Thomson, no material change in its appearance had taken place.

The subject of Dr. Gairdner's observation was a man of twenty-six years of age, in whom the external aperture occupied the place which, according to Aschersohn's results, appears to be its most common seat, viz., the space between the sternal and the clavicular attachments of the sterno-mastoid muscle, and about half an inch above the clavicle. In most other respects, the appearances were the same as in the case previously noticed. The probe had not been passed farther than an inch and a half in an upward direction. With a view to the eradication of this malformation, Dr. Gairdner, upon the 25th of May last, laid open the sinus by dividing the skin, platysma, and fascia in front of it, and has since adopted the usual measures for healing the opening from the bottom. The wound was not entirely closed at the time when the case was communicated to the Society; but it was so much so, as to lead to the confident hope of the operation being ultimately attended with complete success.

In neither of the preceding cases, did hereditary tendency to the occurrence of the imperfection appear; for none of the relations had been known to be similarly affected.

Dr. Duncan's case, observed some years ago, was in some respects similar to the preceding. It appeared chiefly interesting, as being the only case hitherto observed, in which, when the fissure was confined to one side of the neck, it had its seat on the left side. In three of Aschersohn's cases, both sides of the neck were affected; in the remaining eight, as in the two other cases described in the present communication, the fissure was situated on the right side; but in Dr. Duncan's case, as before stated, it was on the left.

The author made this communication to the Society in the hope that additional information might be obtained with regard to the peculiar lateral cervical sinuses described, by the collection of cases observed by other members of the Society whose attention had been thus directed to an imperfection which might otherwise have passed unnoticed by them.—*Lond. & Edinb. Monthly Journ. of Med. Sci.*, Aug., 1845.

5. *Menstruation in an infant, commencing a few days after birth.*—Mr. WHITMORE relates (*Northern Journal of Medicine*, July, 1845), the case of a female child who from a few days after birth had her catamenia regularly at periods of three weeks and two or three days, until her death at the age of four years and some months. At this last period the development of her body was very striking—equaling that of a girl ten or eleven years of age. The mammae were unusually large, the mons veneris collapsed, but well covered with hair, the labia pudendi sparingly so, though these organs themselves were of unusual size for a child. The development of the pelvis, and of all the deep-seated genitals was very considerable; and the lower limbs were proportionately large.

She was of a fair complexion; and her hair, which was of a dark-brown colour, was very plentiful. In the absence of her periodical ailments, she would enter into all the amusements of young persons of her own age; but when she was indisposed, she was exceedingly reserved, and would withdraw from all her playful occupations. When interrogated by familiar acquaintances as to her reason for absenting herself on these occasions from the amusements of other children, she would answer that she was indisposed; but when the same question was proposed to her by those with whom she was not intimate, she would merely blush, without making any reply. There were other young females in the same family, but in them the function referred to manifested no irregularity.

6. *Functions of the Pancreas.*—MM. BOUCHARDAT and SANDRAS, following out their researches on the chemical phenomena of digestion, have recently ascertained that the pancreatic juice possesses the same properties as the saliva. This liquid, taken from the pancreas of strong farm-yard fowls, was transparent and viscous, presenting a slightly alkaline reaction. Mixed with amidou jelly, it liquefied it and transformed it into dextrine and glucose. By adding alcohol, it formed a white deposit, which also acted on the jelly of fecula in the same manner as dia-

stasis. A temperature of 100, (centig.) or the addition of various substances, such as tannin, the mineral acids, or the metallic salts, destroyed its properties. The pancreas itself, extracted from animals, and carefully separated from the different vessels which pass through it, and from the blood by which it may be soiled, possesses in a high degree the property of giving rise to the transformation of fecula. A few fragments of the gland, mixed with starch, tepid, and very consist-ent, convert it, after a few minutes, into a liquid free from viscosity. Pounded and mixed with water, they give a fluid, from which it is possible to separate, with the assistance of alcohol, a flaky precipitate, endowed with the power of dissolving fecula. Other organs, such as the liver, treated in the same manner, do not give the same results. We may therefore conclude, from these facts, that the principal function of the pancreas is to secrete a liquid able to dissolve feculaceous substances, to allow of their absorption in the intestine by the smaller ramifications of the vena porta, and, consequently, to admit of their utilization by the economy.—*Lancet*, June 21, 1845.

7. Theory of Menstruation and Corpora Lutea. By Dr. CHARLES RITCHIE.—At a meeting of the *Medico-Chirurgical Society of Glasgow*, held on the 8th of July, Dr. Ritchie read a paper on the Theory of Menstruation and Corpora Lutea. It will be in the remembrance of our readers, that in a series of papers on the Physiology of the Human Ovary, published last year, (*London Medical Gazette*, 1843-4, and *MONTHLY JOURNAL* for July and October, 1844,) this gentleman set forth a copious proof, in his opinion, entirely subversive of the recent hypothesis of the vesicular origin of menstruation, and corrective, also, of the views previously entertained of the precise nature of corpora lutea. In the present essay, which forms part of a succession of papers now in the course of publication, as a second series on the same subject, the writer, without attempting to explain the mechanism of the fact, but assuming it to be—in the present state of our knowledge—an ultimate one, adopts the idea, that the elimination of ova and menstruation are correlative, and, in many respects, independent effects of the ordinary vital action of the ovaries as glands, and that they are as strictly, both of them, the proper and specific functional phenomena of these organs, as the secretion of mucus, and of gastric juice, and the chymification of the food, are of the stomach; the one, the extrusion of ova, being limited to no special period of life, but taking place, under certain modifications, in all; the other being the result of a periodical exaltation of the organic power of the ovaries in the healthy non-gravid and non-lactating adult women alone; which, from its extension to the nervous, vascular, and absorbing tissues of these glands, occasions the maturation and discharge of their vesicles, and from its further extension to the uterus and vagina, gives rise to the formation of deciduous vessels, and to the menses.

In reference to corpora lutea, again, it will be recollectcd, that Dr. Ritchie, in the paper to which we have alluded, having disposed of the yellow and black blood cysts so often found in the ovaries, limits organized corpora lutea to two species, the white (*corpora albida*), and cerebriform bodies (*corpora cephaloidea*), the former having its soft and dense, and the latter its intra and extra-mural varieties, and both of the latter becoming transformed during utero-gestation into fibrous rose-coloured structures, which he terms *corpora rubra*. In the essay now read, while he repudiated the notion that the excretion of mature ova from the ovaries is the efficient cause of menstruation, he was of opinion that the vascular orgasm of the sexual organs, in which the menstrual condition and the corresponding state in quadrupeds consists, is the true source of corpora lutea; and, holding this view, he suggested that *corpora menstrualia*, or *corpora periodica*, were more appropriate generic terms for these bodies than that in common use, while their modifications or varieties might be very conveniently designated according to their specific physical characters, such as *corpora albida*, &c., on the principles adopted in his former paper. He divided *corpora menstrualia* into primitive, secondary, and tertiary. The two species already referred to,—that constituted by the opaque and thickened membranes of the Graafian vesicle, the result of effusion into their cellulated structure, or the bodies he has called *corpora albida*; and that in which the effusion is larger in quantity, granular, supplied with vessels, and situated in a kind of crypts between the two layers of the follicle, the *corpora cephaloidea*,

he believed to be the only primary or simple forms of corpora menstrualia which ever appear, and that they are never to be seen except in menstruating or recently menstruating women. His secondary menstrual bodies correspond to what have hitherto been termed true corpora lutea, and are obvious transformations of the primitive species; but, instead of being dependent, as is the common opinion, on some peculiar and specific effect on the unruptured Graafian vesicle of impregnation as an act at the moment of conception, he asserted that their modifications had their point of departure from the uterus, subsequent to the begun development of the fetus, and were the product simply of the reflex influence of the excited and congested gravid uterus on the enlarged vessels of the recently formed corpora menstrualia. When the primitive body, formed by menstruation, is of that species in which the granular matter is deposited between the membranes,—an intra-mural cerebriform,—he showed that unless it were a more perfect type of development, there is nothing specific in their conformation to distinguish these bodies during the first two-thirds of utero-gestation, from the same bodies in the virgin female; but that in the last three months of pregnancy, they are converted into dense reddish structures, which continue for a short time after delivery. On the contrary, when the primitive body formed by menstruation happens to be a corpus albidum, (the parietal vessels of which are always obliterated during the menstrual orgasm in which it has its origin,) and when pregnancy occurs while the larger vessels which connect the now inorganic follicle with the surrounding stroma remain patent, he supposed that the secondary or reflected increased circulation of the ovary which gravidity occasions, may give rise to a transudation from such extra-mural vessels, as a secondary deposit or formation, and thus explain the occurrence of those cephaloid granular bodies, the nuclei of which are double-layered opaque membranes. These structures form Dr. Ritchie's extra-mural cerebriform bodies, and like the variety in which the granular substance is deposited between the membranes, they are transformed into corpora rubra in the latter months of pregnancy; when, assuming it to be correct that they are really ruptured Graafian vesicles, which have successively been changed into corpora albida by menstruation, into extra-parietal cerebriform bodies by conception, and into red bodies by the continuance of the uterine congestion during the latter months of pregnancy, they must, of course, be regarded as in a certain sense tertiary formations.

Dr. Ritchie believes that conception, as a general rule, takes place in the human subject, within the uterus, and not in the ovaries or tubes, and the chief peculiarities of his views are, that corpora lutea are produced by menstruation, and not by conception, but that these bodies undergo modifications of a secondary kind from pregnancy; which changes, however, are exclusively extra-ovarian in their origin, and do not arise, as previously supposed, from within the coats of the unruptured Graafian vesicles.—*London and Edinburgh Monthly Journal of the Med. Sci.*, Aug., 1845.

8. Digestion and Assimilation of Saccharine and Amylaceous substances. By M. MIALHE.—It is now commonly believed that the alimentation of animals is effected by means of three different classes of substances, the azotized or albuminous, the fatty, and the saccharine. The researches of late experimentalists have proved that the digestion of the first is effected chiefly through the agency of the gastric juice, and that of the second by means of the bile; but nothing certain was determined relative to the saccharine or amylaceous group of substances. M. Mialhe, in a paper on diabetes, presented to the Academy of Sciences in April, 1844, gave the first sketch of his views on the digestion of these substances, and in the present paper enters into the details. He found that the active matter in the digestion of amylaceous and saccharine matters was the saliva, and by operating on it, discovered its active principle to consist of a peculiar matter perfectly similar in properties and composition to diastase. This active principle of the saliva, which he proposes to name animal diastase, or salivaire, is a white or grayish-white amorphous solid, insoluble in alcohol, but soluble in weak alcohol or in water. Its aqueous solution is insipid to the taste, and has a neutral action on test papers. It is not precipitated by the subacetate of lead; when left to itself it speedily decomposes and becomes acid. The acid which results is the butyric, or one very closely

allied to it. This substance exerts no action on azotized substances, as fibrin, albumen, casein, gelatin or gluten, nor on the neutral ternary compounds, cane sugar, inulin, gum Arabic, and lignin. It exercises, however, a most remarkable action on amylaceous substances, as the following experiments will demonstrate.

When some of this active principle of the saliva is mixed with some starch beat up with six or eight times its weight of water, and the whole heated, the mixture never acquires a gelatinous consistence as plain starch would have done, but each grain of fecula is rendered entirely soluble the moment it becomes hydrated. After a little while the solution is not even coloured by means of iodine, but caustic potass, if heated with it, produces the intense brown coloration, which indicates the conversion of the starch into dextrine and glucose. These substances are easily separated by treating the liquor with five or six times its weight of absolute alcohol, when the glucose is dissolved and the dextrine precipitated.

Raw starch takes a longer time to be acted on by the animal diastase, but its action is greatly increased by heat. The activity of this principle is such, that one part suffices to liquefy and convert into dextrine and sugar more than 2000 parts of fecula.

M. Mialhe relates in his paper the comparative experiments he made with the diastase procured from germinating barley, from which it appears that its action on starch was identically the same. M. Mialhe concludes that all hydrocarbonaceous substances serving for aliment, can only undergo the process of assimilation provided they are decomposable by the weak alkaline solutions contained in the animal humours. This is done immediately in the case of glucose, dextrine, and sugar of milk, and mediately in the case of cane sugar and starch, which must first assume the form of glucose and dextrine. Those hydrocarbonaceous substances, on the other hand, which are neither fermentable nor decomposable by weak acid or alkaline humours, as lignin and mannite, do not undergo in man the digestive or assimilative process.—*Edinburgh Med. & Surg. Journ.* from *Comptes Rendus*.

9. Secreting Structures.—The following comprises an abstract of the chief points contained in an excellent paper by Mr. GoodeSir, relative to the function of secretion as well as the structure of secreting organs.

1st. Secretion is essentially a function of nucleated cells. The cells endowed with this property of secretion possess a peculiar organic power by which they can draw into their interior certain kinds of materials varying according to the nature of the fluid they are destined to secrete. Some cells have merely to separate certain ingredients from the surrounding medium, others have to elaborate within themselves matters which do not exist as such in the nutritive medium.

2d. Though secreting cells thus differ in the nature of the fluid which they secrete, (as whether milk, bile, saliva, or other,) their structure seems to be nearly the same in all cases; each consisting, like other primitive cells, of a nucleus, cell-wall, and cavity.

3d. The nucleus seems to be both the reproductive organ by which new cells are generated, and the agent for separating and preparing the secreted material. The cell-cavity seems destined chiefly to contain the secreted fluid until ready to be discharged, at which time, the cell then matured, bursts and discharges its contents into the intercellular space in which it is situated, or upon a free surface, as the case may be.

4th. The mode of secretion in glands, of which the testicle of the *squalus cornubicus* may be taken as a type, seems to be the following.* Around the extremities of the minute ducts of the glands are developed acini or primary nucleated cells, each of which as it increases in size has generated within it secondary cells, the product of its nucleus. The cavity of the parent cell does not communicate with the duct on which it is situated until its contents are fully matured, at which time the cell-wall bursts or dissolves away, and its contents are discharged into the duct. From this constant succession of growth and solution of cells, it results that the whole parenchyma of a gland is continually passing through stages of development,

* Conglomerate glands in general, as the salivary glands, pancreas, &c., may be included in this class, though individual differences as to the arrangement, and other peculiarities of the cells, occur in each.

maturity, and atrophy, the rapidity of which process is in proportion to the activity of the secretion. There seems, therefore, to be no essential difference between the process of secretion and the growth of a gland; the same cells are the agents by which both purposes are effected; the parenchyma of glands is chiefly made up of a mass of cells in all stages of development; as these cells individually increase in size and so constitute their own growth as well as that of the common glandular mass, they are at the same time elaborating within themselves the material of secretion, which, when matured, they discharge, by themselves dissolving away. There are a number of germinal spots or centres in a gland from which acini or primary cells are developed.

5th. The true fluid of secretion is not the product of the parent-cell of the acinus, but of its included mass of secondary cells, which themselves become primary secreting cells, and form the material of secretion in their cavities. In some cases these secondary cells pass out entire from the parent cell, constituting a form of secretion in which the cells possess the power of becoming more fully developed after being discharged and cast into the duct, or cavity of the gland.

6th. In the order of the glands, which consist of follicles more or less elongated, the following is the arrangement.*—At the blind extremity of each follicle is situated a germinal spot, at the centre of which are constantly or periodically developing nucleated cells. These cells, as they become developed, tend towards the open extremity of the follicle. At first they are simple nucleated cells, but as they advance they gradually assume the characters of primary secretory cells, and contain secondary cells in their interior. When fully matured and arrived at the attached extremity of the follicle, the primary cells burst and allow their contents to pass into the branch of the duct to which the follicle is attached. Each follicle is virtually permanent, though both its contained cells and its walls are continually undergoing change, receiving development and addition at the blind extremity, being absorbed and disappearing at the other.

7th. Mr. GoodSir considers that the process of original development of glands in the embryo is identical in its nature with the growth of a gland during its state of functional activity. The blastema which announces the approaching formation of a gland in the embryo, in some instances precedes, and is in other instances coterminous with, the conical blind protrusion of the membrane upon the surface of which the future gland is to pour its secretion. In certain instances it has been observed that the smaller branches of the ducts are not formed by continued protrusion of the original blind sac, but are hollowed out, independently, in the substance of the blastema, and subsequently communicate with the ducts. It appears highly probable, therefore, that a gland is originally a mass of nucleated cells, the progeny of one or more parent-cells, and that whether the membrane in connection with the embryo of the gland sends a conical protrusion into the mass or not, the extremities of the ducts are formed as closed vesicles, and then nucleated cells are formed within them, and are the parents of the epithelium cells of the perfect organ.—*Ranking's Abstract*, vol. i.

10. *Anatomy and use of the Thymus Gland.*—On this subject we are fortunate in being able to refer to some recent researches by Mr. SIMON,† the value and importance of which have attained for them the high honour of gaining the first Astley Cooper prize. In the endeavour to place before our readers a brief abstract of this work, we shall omit the author's very concise and accurate history of the labours of former writers, and proceed at once to the discussion of the original portion of his labours.

The first appearance presented by the gland, as observed in the foetal calf, is that of a simple tube lying along the carotid vessels, and exhibiting faint traces of commencing areolar tissue. The contents of the tube at this time are granular, but do not contain any distinctly formed corpuscles. Mr. Simon suspected that this tube was not the primary condition of the organ, but that it might exist at an

* Under this class may be included the follicular glands of the mucous membrane of the stomach, &c.

† *Physiological Essay on the Thymus Gland.* 4to. London: 1845.

earlier period in the more simple form of a string of primordial cells; he has not, however, been able to verify the suspicion. He refutes the opinion of Arnold, (*Lehrbuch der Physiologie*, tom. ii, p. 265,) that the thymus is a development of the respiratory mucous membrane, as well as that of Bischoff, that it is in some way connected with the thyroid gland. The development of the gland proceeds in the same manner as that which has been observed as the primordial tube of the true glands, that is to say, by the addition of diverticula, which spring from the sides of the tube. These diverticula, when they have arrived at three-fourths of a sphere, themselves give rise to secondary bulgings, which again reproduce others, until at length by the repeated occurrence of the same process, conjoined with a continued interstitial molecular increase, the organ attains the bulk and complexity of the structure exhibited by it in the mature state of the foetus.

The researches of Mr. Simon confirm in the main the dissections of Sir A. Cooper, with respect to the existence of a central cavity; he thinks, however, that it has hitherto been supposed to be larger than it really is. They likewise accord with those of Haugsted, in reference to the period at which the thymus attains its greatest size, this being, not as is commonly supposed during intra-uterine life, but at a certain period after birth. This exact time it is not easy to ascertain, as it is probable that it varies in different instances; it has, however, been laid down as a law by the author, that its bulk is inversely as the amount of mortality and consequent exhaustion of tissue, and its duration, therefore, dependent upon the period at which muscular activity becomes established. In reference to this point the author has arrived at the following results:—1st. During the period next succeeding birth, the activity of the thymus is remarkable; it increases considerably in size, becomes turgid with secretion, and its specific gravity is lowered by the greater fluidity of its contents. This first growth is far out of ratio to the general increase of the body. 2d. For several months it continues to increase at a diminished rate, and merely in proportion to the general growth of the body; its further enlargement ceases about two years after birth. 3d. From this time, during a *very variable* number of years, it remains stationary, and, supposing the individual to be adequately nourished, gradually assumes the structure of fat. 4th. The duration of its decay, and the epoch of its entire vanishing are still more uncertain; about puberty, it seems in most cases, to suffer its chief loss of substance, and to be reduced to a vestigial form.

The first appearance of this organ before birth is supposed by anatomists to be as early as the fifth week after conception, but in the tenth week of pregnancy it is sufficiently perceptible to the naked eye. It, at this time, exhibits a distinct tubulo-vesicular structure. The third chapter of the work contains a description of the mature gland. Its mode of formation has been already alluded to; it remains only to mention the intervesicular structure and the contained fluid. The intervesicular tissue is a prolongation of the wall of the original tube, and consists of an indescribably fine membrane, over which a close capillary network is spread for the purpose of supplying materials for secretion. This secretion consists of a fluid, in which, as was discovered by Hewson, microscopic corpuscles were seen to float. These corpuscles are circular discs of nearly the same size as the coloured particles of the blood. Their average diameter is $\frac{3}{38}^{\text{m}}$ of an inch. They are marked by minute dots which are supposed to be molecules of fat in combination with fibrin or solid albumen.

The author gives three separate chemical analyses of the thymus fluid, all of which concur in demonstrating the error of the opinion that it was essentially a highly carbonaceous product. It is proved by them on the contrary that the fluid contains no more carbon than enters into the composition of muscle and blood.

The nerves of the thymus are derived from the inferior and middle cervical ganglions and from the cardiac branch of the pneumogastric nerve.

In the comparative anatomy of the gland, the author's researches have been very extensive, but our space will not allow of a repetition of the different tribes of animals in which he has carried on his investigations; we shall content ourselves with giving the following summary of the results to which they lead. 1st. The presence of the gland is coextensive with pulmonary respiration. 2d. Its shape and position are variable and unimportant. 3d. Its size and duration are, generally

speaking, in proportion to the habitual or periodical activity of the animal. 4th. Where it remains as a persistent organ (as in the hibernating tribes), it is one of the general reservoirs for the accumulation of nutritive material.

In further prosecuting the developmental anatomy of his subject, the author next passes in review the morphological history of the true glandular system, with which he contrasts that of the thymus and its analogues, the thyroid, supraenal glands, and the spleen. The principal difference between the two orders of organs appears to consist in the ultimate arrangement of their secreting cells, that of the true glands being distinctly cellular, that of the glands without ducts, consisting of the cytoblast alone, the involving cell-structure being only of exceptional formation. It is a curious fact, however, that in those animals in which the thymus becomes a permanent organ, the nucleus, instead of being simply surrounded by aggregate molecules, as in the temporary state of the organ, is converted into a perfect cell. These different points are rendered plainly intelligible by the plates with which Mr. Simon's work is liberally illustrated.

We now pass on to the most remarkable part of the work, the physiology of the gland. It is thus stated by Mr. Simon:—

"It secretes into a closed cavity certain particular elements of nutrition, which are deposited differently under different circumstances, viz.:—1st. In most animals it occurs only temporarily; the secreted matter then presents itself under a *fluid form*, and closely resembles the liquor sanguinis in ultimate chemical composition. 2d. In some animals, after discharging this temporary function, it assumes one of greater permanency, the sequestration of material in the form of solid fat. In both cases, however, though peculiar, the function is especially the same, and consists in the laying by of nutrient material. How this is used up, Mr. Simon next proceeds to show. Here, however, we are called to notice a certain circumstance which is co-existent with both the temporary and the permanent function of the gland, viz., that in both, *waste of tissue* is at a *minimum*. In the younger animal, muscular activity, which mainly contributes to this waste, has not commenced; in the hibernating animal it is suspended. Now the waste of tissue being at a minimum, the pabulum for the support of the respiratory process must be supplied from some other source."

This source Mr. Simon declares to be the nutritive matter laid up in the central cavity of the thymus as in a reservoir, and he therefore assumes the office of that gland to be that of sequestering nutritive matter, whereby it becomes "a sinking fund of nourishment in the service of respiration."—*Ibid.*

ORGANIC CHEMISTRY.

11. *On the Chemical Laws that govern secretion.* By Dr. G. J. MULDER.—It is a property of the chemical forces, which are active in any substances, to excite analogous forces in others. We notice this especially in organic nature, and it is nowhere more strikingly illustrated than in the nutrition of animals. Blood, a homogeneous fluid, circulates through very different parts of the body. In the muscles it sustains muscles, in the liver it supplies the component parts of the liver, and from it the gall is there secreted; in the kidneys it maintains their various parts, and secretes the urine, &c. None of these secretions appear in the blood with their peculiar qualities; of some of them not even a trace is found in it. But the four organic elements of the whole are to be found in protein and its combinations, in the colouring matter of the blood, &c. The elements of protein might, no doubt, be transposed in the liver, &c., by means of catalysis, and so the component parts of the liver and gall be produced from it. It would only be necessary, then, that the constituent parts of the liver should be put in contact with the component parts of the blood, and the forces of affinity, resident in the substance of the liver, &c., would not require to influence those in the protein, or to produce any chemical alteration in its component parts.

Other causes, however, ought undoubtedly to be considered. For instance, a change of its component parts takes place in the liver itself, and, from the first,

chemical forces actively operate therein. For the continual change of its component parts is a chief characteristic of every living organic substance. These forces may disturb the chemical equilibrium of other substances, and cause the formation of new products. If the constituents of the blood—the combinations of protein, the colouring matter, &c.—enter the liver when it is in a state of action, and are there put in contact with the gall during its secretion, and with the substance of the liver itself, which is in a state of continual alteration, then the result will be, that this change of their component parts having taken place, the action will be transferred to the elements of the blood, and will maintain the secretion. If, on the other hand, the constituents of the blood are in a state of continual change, then the circle of action in which they are involved will extend to the mass of the liver; and so with every organ.

We have, however, no more knowledge of the manner in which this secretion originally commences—whether it proceeds from the blood or from the secreting organ, or whether each of these contributes its part—than with the manner in which the first germ of the whole organ, the liver, is produced, or in which the germ of the animal is converted into an animal. But the continuance of the action—the duration of secretion—entirely corresponds with some other phenomena, which we may observe separately, and which therefore throw light upon these animal actions. This is the case especially with fermentation, from which Liebig has drawn many illustrations, for the purpose of clearly exhibiting his ideas; and with the same view we shall also avail ourselves of the same process.

Yeast changes sugar into carbonic acid and alcohol, and is at the same time changed itself. The latter change causes the former, and is only transferred to the sugar. If we substitute blood for yeast, and the liver for sugar, we may form an idea, more or less, of the secretion of the gall. The component parts of the blood are continually undergoing change. This constant change of the component parts in organic bodies is a chief cause of the continuation of their existence. The liver without intermission assumes new parts and loses others. This process we call nutrition. At the same time that the parts of the blood in the substance of the liver are thus undergoing change, chemical forces are excited; these forces are transferred to the elements of the blood, and so are enabled to produce from them the gall. This takes place the more easily, as the blood itself is also in a state of continual alteration, and thus readily yields to the impulse which, in some way or other, is communicated to it. As the impulse varies, so does the effect. Hence that great diversity in the secretion of very dissimilar substances, which are in a state of alteration, from the same fluid—that is, the blood, which is itself at the same time in a state of decomposition.

From the nutrition of the cellular texture, however, which must be produced from the component parts of blood, and from the nutrition of all the secreting organs—which, besides producing the secretion, maintain themselves by separating what they require from the constituents of blood—we learn that catalysis cannot be left out of consideration in the mere process of nutrition. Further, we must apply the same principle to all the solid parts of the body, which are compounds of protein. The muscles, for instance, have the property of secreting protein from blood, and converting it into fibrin; on the other hand, when protein is deficient in the blood, this fibrin is taken from the muscles and converted into blood-protein, as in diseases of long continuance and in emaciation. Muscles have thus the property of forming muscle-fibrin by simple contact, if protein abounds in the blood, and this result can be ascribed only to a cause similar to that by which crystals gradually accumulate from solutions of salts. It is at least a peculiar action, different from ordinary chemical action, which takes place when the plasma of blood is transformed into muscles, which in composition do not essentially differ from the plasma. The same is the case with the production of hair, nails, and permanent horns.—*The Chemistry of Vegetable and Animal Physiology.*

12. *The Urine in Bright's Disease of the Kidney.*—By Dr. SCHLOSSBERGER. After it was observed that albuminous urine accompanied Bright's disease of the kidneys, the presence of *albumen* in the urine was long regarded as pathognomonic of that affection, and its diagnosis was thought to be complete, when albumen showed itself in the urine on the application of heat, or on the addition of mineral

acids. This idea is now abandoned, as the later and more elaborate researches of Simon, Becquerel, Lecanu, Golding Bird, &c., have shown that the presence of albumen in the urine of disease is so frequent, that its absence is nearly as remarkable as its presence. That Clinical Chemistry, therefore, may preserve in the eyes of the practical physician its well-deserved importance, it seemed imperative, in the present instance, to seek for some new method of diagnosis. It has sought aid, therefore, in the *microscope*, an instrument without which, in these times, this branch of Chemical Science can make but little progress.

F. Vogel, Scherer, Simon, and others, have recently found in the urine of Bright's disease *tortuous thready bodies*, of which Henle appears to give a satisfactory explanation, when he regards them as inflammatory exudations thrown into the smallest tubuli of the cortical substance of the kidneys. In the case of Bright's disease, which I shall afterwards have occasion to describe, I discovered these microscopical bodies in large quantity, and of various sizes; the majority of them were filled with the so-called globules of inflammation; others contained globules identical with those single particles, the aggregation of which appears to form the globules of inflammation; a few also were without either of these. Whether the appearance in the urine of those formations is sufficient for the diagnosis of Bright's disease appears to me very doubtful, since they will most probably be found in every primary or secondary nephritis, in which coagulable lymph has been secreted in the tubuli uriniferi; and this is the more probable, as Lehman and Scherer have already discovered these bodies in the urine of scarlatina.

The existence of albumen, and of those microscopical bodies in the urine, not being sufficient to characterize Bright's disease, we shall now inquire, if in the *relative proportions of the ingredients of the urine*, there cannot be found some peculiarity which, with the above mentioned tests, may indicate with sufficient certainty the diagnosis of that affection of the kidneys. Scherer (in his *Chemico-Microscopical Researches*, Heidelberg, 1843), gives several analyses of the urine of Bright's disease, in all of which the *total amount of solid matter* (notwithstanding the presence of albumen) is very remarkably diminished. In one case, for instance, he obtained from 1000 parts of urine only 12·4, and in another, 11·7 of solid residue, exclusive of the albumen of which in the two cases he got respectively two and three parts per mil., whilst from the healthy urine, twice, or even three or five times this quantity are obtained.

If this great deficiency of solid matter was shown to be constant even to a certain extent, it would form, along with the albumen and the microscopical formations, an excellent method of diagnosis, principally, as in other cases of albuminaria, in inflammations, and in exanthematous fevers, the quantity of the solid residue of the urine is generally increased, in consequence of the augmented metamorphosis of the blood. To the great majority of the analyses of Becquerel, (*Séméiotique des Urines*, Paris, 1841, p. 505), the urine in Bright's disease was what he calls "*animique*," that is, very poor in solid ingredients: in one acute and feverish case, however, he obtained thirty-five parts per mil. of solid matter. Simon, on the contrary, (*Anthropochimie*, vol. ii, p. 415, and 418,) in a few analyses of it, found 33·6 per mil. of solid residue,—a quantity which, after subtracting the included albumen, approaches very near to the normal proportion.

These results show that the quantity of solid matter in the urine of Bright's disease varies very much, in some cases being very poor, and in others, again, very rich in solid substances. This diversity may be perfectly explained by various accidental causes and individual circumstances, but principally, by the stage of the disease at which the examination was made, by the chronic or acute character of the disease, and often by the general or constitutional causes which gave rise to it.

But there is another question, viz., whether the *relative proportions between the quantities of the different healthy solid constituents of urine* are not abnormal in Bright's disease? Before, however, entering upon the discussion of that question, I shall take the liberty of giving the analysis of such an urine, which not only possesses some interest with regard to the point alluded to, but has also a particular reference to the period of the disease at which it was secreted. The history of this case of Bright's disease was communicated to me by some friends in the Julius' Hospital at Würzburg, but as it is in various points of view very incomplete, I shall only select a few of the principal points to introduce the reader somewhat

to our patient; for the analysis of an abnormal secretion, or of a product of disease without the history of the case, appears to me to be in itself without value, to be withdrawn from every source of control, to favour false conclusions, and therefore to be more prejudicial than useful.

The patient was a basket-maker, nineteen years old, of scrofulous diathesis, lax, torpid, and phlegmatic in his constitution. Both of his parents had died of general dropsy, which, in the case of his mother, originated in an organic affection of the liver. The patient himself had never been affected by any important disease until Easter, 1844, when, without any very apparent cause, but most probably after exposure to cold, he was attacked with colic and œdema of the feet; with which a diminution of urine was soon associated, so notable that it surprised the patient himself. About a month afterwards, dropsical swelling of the lower part of the abdomen, slowly but constantly extending to the superior regions, supervened. The urine, which, till the middle of August, had been scanty, became from that period muddy and darker in colour. The medicines administered for the dropsical symptoms had little effect, and the disease appeared to have passed into a chronic state, till suddenly on an evening in September, alarming symptoms of affection of the brain showed themselves, in the form of maniacal paroxysms, followed by intervals of rest but perfect unconsciousness. After this had continued about twelve hours, they ceased, and the patient, though somewhat exhausted, passed again into his former condition. I had now an opportunity of subjecting the urine secreted *immediately before* these attacks to an elaborate analysis in the laboratory of Professor Scherer. My friend, Dr. Renges, of Nassau, again analyzed the urine which the patient had passed a few hours *after* the paroxysm, and permitted me to publish his results.

1. *The urine before the paroxysm.*—This was secreted in the evening. It amounted to about ten ounces, was of a pale yellow colour, faintly acid, and manifestly contained the above-mentioned tortuous bodies, mixed with epithelial fragments. After standing for eight hours, it deposited a considerable sediment of uric acid: its specific gravity was 1011·6. It was evaporated, till, by longer heating in the water-bath, no farther diminution of weight was obtained, and a residue of 58·06 parts per mil. remained. The incineration of that residue gave 9.77 of fixed salts. Coagulated by boiling, (due attention being paid to the necessary precautions with regard to neutralization,) it yielded 17.9 of albumen. The filtered fluid (after separating by means of nitric acid the urea, which amounted to 7·6), gave 19·5 of matter soluble in alcohol. That part of the filtrate which was insoluble in alcohol, amounted to 12·7 per mil. and of this 2·6 consisted of uric acid, with a little mucus; so that, of matter insoluble in alcohol, of phosphates of the alkaline earths, and of sulphates, there remain 10·1 *per mille*.

2. *Urine secreted after the paroxysm.*—The physical properties of this urine were almost the same as the last. The analysis was conducted in the same manner; and the points in which the two analyses differ, and those in which they agree, will be made manifest by the following table:—

	A. Before paroxysm.	B. After paroxysm.
1. Water,	. . . 942·0	. . . 931·3
2. Albumen,	. . . 17·9	. . . 17·0
3. Urea,	. . . 7·6	. . . 4·5
4. Alcoholic extract with salts,	. . . 19·5	. . . 20·5
5. Uric acid and mucus,	. . . 2·6	. . . 5·2
6. Extractive substance and salts insoluble in alcohol,	{ 10·1	. . . 20·9
Water,	942	Water, . . . 931
Solid residue,	58	Solid residue, . . . 69
	—	—
	1000	1000

In both analyses, therefore, there was found a considerable quantity of solid residue, even after the subtraction of the albumen. On the other hand, we have here, as in almost all the cases examined by Becquerel, Simon, and others, a considerably diminished secretion of urea. In healthy urine, the urea amounts nearly

to one-half of the solid residue: a fact which is especially seen in the analyses of Berzelius and Lehman, both of whom found in 60 parts of residue about 30 of urea. Lecanu, also, as the average quantity of urea in healthy urine, gives from 27 to 30 parts per mille. (*Journal de Pharmacie*, 1839, tom. xxv. p. 68.) His accounts are, however, of less value, as in his numerous analyses of urine he omitted to determine the total amount of solid residue. In the analysis given above I found the amount of urea to be about one-sixth, and Dr. Renges, in the urine after the paroxysm, found it to be one-eleventh of the whole solid residue after subtraction of the albumen. Becquerel likewise, in all the cases of Bright's disease, of which he had examined the urine, had already, with one single exception, found that the urea amounted only to one-third part, or even less, of all the solid constituents.

A diminution of urea, therefore, both in its relative proportion to the other solid constituents of urine, and also in its absolute amount, appears pretty constant in the urine of Bright's disease. But it would be rash to draw any definite conclusion merely from these results. It is necessary to gather materials before we build. Whether the source of the diminution of urea in this disease is to be sought for in an original alteration of the blood; in a deranged metamorphosis of matter in the body, qualitatio or quantitatio, or in the degeneration of the secreting organ, and the injury thereby unavoidably given to its secreting power; on all of these points farther research can alone decide.

Though in many cases, at least, the metamorphosis of the blood appears to be unaffected, yet urea is produced, though secreted in deficient quantity and in abnormal situations; and the blood becoming overcharged with that singular substance, produces a narcotic action upon the nervous system, just in the same manner as the bile acts in some cases of icterus.

The existence of urea in the blood, supervening on granular degeneration of the kidneys, appears from the researches of Babington, Christison, and Simon, no longer doubtful, although some others have failed in detecting it: for one positive account of an authentic observer has, in questions of this sort, more value than ten negative results. Moreover, in the serum exuded so frequently into the ventricles of the brain in cases of Bright's disease, the presence of urea has been repeatedly demonstrated. I myself, in my capacity of assistant physician in the Catherine Hospital at Stuttgart, observed one such case, where the serum in the ventricles of the brain contained urea beyond all doubt. The quantity of the other solid constituents of the urine in Bright's disease, seems much more subject to variation; the quantity of uric acid was, for example, found by some chemists much diminished whilst in our analysis, its quantity greatly surpasses the average of healthy urine. In the analytical methods for the exact quantitative determination of those constituents, there exist many sources of error, often scarcely avoidable, and therefore further researches are necessary to ascertain these.—*Lond. & Edin. Monthly Journ. of Med. Sci.*, Aug. 1845, from *Esterlin's Jahrbücher für Pract. Heilkunde*, for Feb., 1845.

13. *Miscellaneous Observations on Blood and Milk.*—This is the title of an interesting paper, read before the Royal Society of Edinburgh, on the 7th of April last, by Dr. JOHN DAVY.

The author first treats of the state of combination of the alkali in the blood. Enderlin, from his recent analysis of the ashes of the blood, has inferred that its alkaline reaction is not owing to the presence of carbonate, but of the tribasic phosphate of soda. The author, even admitting the accuracy of Enderlin's results, questions the propriety of applying them to the condition of the alkali in the liquid blood. Carbonate of soda, he observes, is decomposed when heated with phosphate of lime; added in small quantity to blood, it is not to be detected in its ashes. This may account for its not having been found in its ashes. Were the opinion referred to correct, an acid added to blood or its serum, after the action of the air-pump, ought not, on re-exhaustion, to occasion a farther disengagement of air; but he finds that it does. This with other results, induces him to give the preference to the conclusion, that blood contains the sesquicarbonate of soda.

He next considers the viscid quality of the blood particles, and their tendency to adhere together in groups distinct from their aggregation in piles, and to adhere as

well to other objects. Under the microscope, using the compressor, the quality in question is still exhibited; when a cluster of blood corpuscles is broken up, and its parts set in motion, some of them, while adhering to each other, and only then, are drawn out almost to a fibre; and yet the instant the adhesion is broken, the detached particles, now solitary, recover their circular outline. This viscid property of the blood corpuscles appears to be distinct from that of coagulable lymph; lymph being viscid, not in its liquid state, when it attenuates even the serum, but in its transition state, just before and when in the act of coagulating.

The third subject treated of, is the tendency of fibrin in coagulating to a certain arrangement of its particles. In proof of this he adduces the instance of the investing pellicle or membrane of the buffy-coat; the tubes of the fibrin formed as a cast, when blood is stirred with a rod in the act of coagulating. The cyst-like cavities occasionally met with in fibrinous concretions, whether filled with the serum or puruloid fluid, found after death in the heart and great vessel;—in all which a kind of *nitus formativus* is displayed, and an arrangement more or less regular; and which may be applicable, he believes, to account for the cysts of aneurisms speedily following punctured wounds of arteries, and for the sacs of false aneurisms, continuous with, and hardly to be distinguished from, the lining membrane of the vessel.

The last subject treated of, is the effect of serum in promoting the coagulation of milk—a property which serum possesses in common with the white and yolk of the egg, on the application of heat. The results of trials of mixtures of serum and milk in different proportions are stated, from which it appears, that 1 part of the former heated with 5 of the latter will occasion its coagulation, and even when mixed with a third more. From analogy, the author infers, that serum and white of egg may have a like effect on vegetable juices containing albuminous matter similar to casein. The action of one animal fluid, and those so like as serum and milk, he refers to as a curious subject for speculation, and as deserving attention, not only in relation to culinary, and some manufacturing processes, but also, it may be, in connection with physiology, and perhaps pathology.—*Proceedings of Royal Society of Edinburgh*, vol. ii, No. 26.

14. *Analysis of the Urine of Insane Patients*, in St. Luke's Hospital, in the year 1844. By ABR. J. SUTHERLAND, M. D., and EDW. RIGBY, M. D. (*London Med. Gazette*, June 6th, 1844.)

In examining the characters of the urine in the different forms of insanity, Drs. Sutherland and Rigby have selected that which was passed immediately after rising in the morning as being least liable to be affected by food, and therefore best calculated for affording a fair specimen of any peculiarities it might possess. The following is a summary of the results of their investigations:—

In mania and melancholia the prevailing colour of the urine is high; in dementia it is light.

It is acid in at least 80 per cent. of the mania and melancholia cases; in dementia, the proportion is much smaller—viz., 63·54 per cent.

Sediments of one sort or another occur in almost every case of mania and melancholia, especially the latter; in dementia, in only every other case.

The specific gravity in the two former species ranges most usually between 10·21 and 10·30; that of melancholia frequently exceeds even 10·30, whereas that dementia is usually found between 10·11 and 10·20.

Serous urine was a rare occurrence; viz., 7·50 in melancholia; in mania, 5·35 and dementia, only 1·04 per cent.

Excess of urea was seen most frequently in melancholia, least so in dementia.

Lithic acid and lithate of ammonia were likewise observed most frequently in melancholia, and least so in dementia.

Lithic acid being, in all three forms of insanity, of much more usual occurrence than lithate of ammonia.

Crystals of triple phosphate were met with in dementia at the rate of 25 per cent.; in mania, 23·21: and in melancholia, 6·66 per cent. Crystals of oxalate of lime were seen in every fourth case of melancholia, or, at the rate of 25 per cent. In mania, the proportion was 17·85, and in dementia, only 2·08 per cent.

Carbonates were seen most frequently in dementia and melancholia.

Muriates occurred at about the average of 13 per cent. in all three forms of insanity.

Muco-pus globules were most frequent in mania; viz., 17·85 per cent.; whereas in melancholia they were at the rate of 10, and in dementia of 7·72 per cent.

SUMMARY.

	Colour of urine.	Acid Urine.	Sediments.	Specific Gravity.	Serous.	Urea, Excess of.	Lithic Acid.	Lithate of Ammonia.	Triple Phosphate Crysals.	Oxalate of Lime.	Carbonates.	Muriate of Ammonia	Muco-pus
Mania	High	80·35 per cent.	87·50 per cent.	Between 10·21 and 10·30	5·35 per cent.	33·92 per cent.	39·46 per cent.	19·64 per cent.	23·21 per cent.	17·85 per cent.	16·07 per cent.	14·28 per cent.	17·85 per cent.
Melancholia	High	80·00 per cent.	100 per cent	Between 10·21 and 10·30	7·50 per cent.	47·50 per cent.	47·50 per cent.	32·50 per cent.	6·66 per cent.	25· per cent.	30· per cent.	12·50 per cent.	10· per cent.
Dementia	Light	63·54 per cent.	54·16 per cent.	Between 10·11 and 10·20	1·04 per cent.	16·66 per cent.	13·54 per cent.	1·04 per cent.	25· per cent.	2·08 per cent.	34·37 per cent.	14·58 per cent.	7·27 per cent.

15. *Analysis of the Menstrual Fluid.*—Rindskopf* analyzed the menstrual discharge of a vigorous and healthy girl. It was extremely acid and contained:—

	1st Analysis.	2d Analysis.
Water	820·830	821·892
Solid residue	179·170	156·457
Salts	10·150	20·651
	Albumen and haemoglobin	Extractive matters and salts

Vogel† analyzed the menstrual discharge in a case of prolapsed uterus. It was of an intensely red colour, thick, and viscid; it did not coagulate, but, after standing for some time, a colourless serum separated. The fluid obtained at the commencement of the flux yielded 83·9 parts of water, and 16·1 of solid materials: and that obtained near the termination yielded 83·7 of water, and 16·3 of solid materials. The serum contained 93·53 parts of water, and 6·47 of solids, of which 0·64 were fixed salts.

No one who has carefully studied this secretion can doubt that fibrin is generally present. Its determination is, however, often impossible, in consequence of the vaginal mucus preventing the coagulation of the blood.

In the corresponding secretion in the mare, we succeeded in obtaining 4·3 parts of fibrin from 36 grains of the clotted portion of the discharge.—Ranking's Abstract.

MATERIA MEDICA AND PHARMACY.

16. *The Medicinal qualities of Indian Hemp and the best mode of administration.*—The hemp has long been known in India as a powerful intoxicating plant. It has in consequence a variety of names applied to it in Arabic, some of which have been translated as "leaf of delusion," "increaser of pleasure," "exciter of desire," "cementer of friendship," &c. Linnæus was well acquainted with its "vis narcotica, phantastica, dementens."‡ In 1839, Dr. O'Shaughnessy§ directed attention to it as a valuable remedy in rheumatism, tetanus, cholera, and infantile

* Canstadt's Jahrsbericht, 1844.

† Ditto.

‡ Dr. Royle's Illustrations of the Botany of the Himalayan Mountains, p. 334.

§ On the preparation of the Indian Hemp or Gunjal, Calcutta, 1839.

convulsions, and published some cases treated by himself, Mr. O'Brien, Dr. Bain, and Mr. Richard O'Shaughnessy, the result of which appears fully to justify the opinion he entertains of it, as a most valuable therapeutical agent. Thus one patient in whom tetanus supervened upon cauterization of the back of the hand by a native empiric, was completely relieved of the tetanic paroxysms, but died from the extension and mortification of the ulcer on the hand. Of seven cases of severe tetanus treated by Mr. O'Brien, four recovered; and one deplorable case of traumatic tetanus, arising from two suppurating wounds on the scrotum, was cured by Mr. Richard O'Shaughnessy. The effects of the hemp in these cases were giddiness, intoxication, and sleep, during which the tetanic paroxysms ceased, returning again with diminished violence on awaking, and being again removed by a repetition of the medicine. Since the publication of Doctor O'Shaughnessy's essay, the hemp has been administered in this country, both to animals and to the human subject, but without any very marked effects.* Mr. Donovan has ascertained that hemp grown in this country is destitute of the principle which renders the Indian plant so desirable an excitant to the voluptuous people of the east. As to the mode of administration, Mr. Donovan remarks :†—

"I am of opinion that of all the preparations, the only one to be relied on is the tincture of the resin, prepared in India from hemp collected at the proper season.

"As to the modes of administration, I have tried many, and find the following to be the best:—‡R—Tincturæ resinæ cannabis Indicæ ℥xv; spiritus rectificati ℥xlv. Misce: fiat haustus.

"The patient should be directed either to swallow the whole of this directly from the bottle, to avoid loss, or to pour it into a little water, and *instantly* swallow it off. If it be not taken instantly, the resin will be precipitated, will adhere to the vessel, and thus escape being swallowed. This always happens when the prescriber directs water to be mixed in the draught by the apothecary; and I have seen several disappointments in consequence. The form of emulsion does not succeed; for although the resin is at first diffused, it sooner or later separates. The practitioner should be also on his guard to order the tincture of the resin, lest tincture or the herb be used, which in small quantities is powerless."

Mr. Donovan reports several cases of neuralgia, which, he says, are not a *selection of the successful cases out of many*, but a faithful record of *all* that came under his observation of which the termination was distinctly known. It appears that far more than the majority of them were cured by the agency of the hemp, and that all the rest were more or less relieved.

The most remarkable effects observed by Mr. Donovan were giddiness, confusion of ideas, great diminution of feeling, and sound sleep. He says the effect on the sensorium is generally alarming to the patient as well as to the bystanders, unless they were previously made aware of what was to be expected. Some patients evince a great terror of death; but on recovering from the fit of narcotism, they laugh at their fears, and are generally ready for another trial. The aphrodisiac effects of hemp have been insisted on by all Oriental writers. Among all the instances of its administration to male patients, Mr. Donovan observed this effect in one only. In no case did it produce those rapturous ideas and ecstatic dreams described by the Oriental writers. In only one or two were the ideas even pleasing; and some were singularly depressed, and under apprehension of immediate death. All writers agree in attributing to the Indian hemp the effect of exciting hunger, and this often in a voracious degree. This effect has been repeatedly observed by Mr. Donovan. He says the reflecting portion of the profession will decide for themselves whether, as ministers of relief to the sick, they are at liberty to withhold an impartial trial to a medicine of such approved power, and expresses his belief that Indian hemp will one day or another occupy one of the highest places amongst the means of combating disease.—*Dr. George Johnson's Report in Ranking's Abstract.*

* Pereira's Materia Medica, vol. ii., 2d ed., p. 1098.

† Dublin Journal of Medical Science, January, 1845, p. 363.

‡ One drachm of the tincture contains three grains of the resin.

17. *On the Pharmaceutical and Chemical character of the Peruvian Matico.*—Dr. HODGES states that about five years ago, he received a parcel of the leaves of the matico from a friend who had resided many years in Peru. The latter informed him that they were universally regarded by the native practitioners of that country as a most valuable remedy in various diseases, and also related several marvelous stories, current among the Indians and European settlers, of their power in arresting the most violent hemorrhages, particularly those connected with the bladder and urinary organs. As the leaves have not been subjected, so far as we can ascertain, to a careful chemical examination either in this country or on the continent, the following observations may be interesting:—It is, we believe, to Dr. Jeffreys, of Liverpool, that we are indebted for the first notice, in this country, of the medicinal virtues of the matico.*

Its action, when applied externally as a styptic, has been established in the practice of Dr. Munro,† of Dundee; and Dr. Lane.‡ of Lancaster, has also lately communicated the results of his experience regarding its internal administration, which are confirmatory of its South American reputation. On the continent, a short notice of it has appeared in the *Pharmaceutische Central Blatt*, January, 1843, by Dr. Martius; and a brief and imperfect account of it is also given in the Dictionnaire of Mérat and De Lens. It is stated by Dr. Martius that like the gunjah which the East Indian prepares from the *cannabis Indica*, the leaves and flowers of the matico have been long employed by the sensual Indians of the interior of Peru to prepare a drink, which they administer to produce a state of aphrodisia.

The botanical history of the matico appears to be but imperfectly known; and there exists a difference of opinion even as to the class of plants from which it is derived; Dr. Martius, in the *Pharmaceutical Blatt*, considering it to belong to the *Phlomis* tribe, while in the *Flora Peruviana* it is described as a *Piper*. By immersing a specimen of the plant in warm water, we are able to examine it with considerable accuracy; and certainly its characters appear very unlike those which belong to the *Phlomis* family. The stems are woody, round, and pubescent; the leaves sessile, acuminate-lanceolate, rugose, and crenate, their upper surface of a dark green, and their lower of a pale green colour.

It is said that the name of the plant is derived from a Spanish soldier, named Matico, who, lying desperately wounded, and bleeding to death, in his agony caught accidentally some of its leaves, and by their application arrested the hemorrhage, and healed the wound. The leaves have a strong, aromatic, slightly astringent taste. From experiments which Dr. Hodges has made, he concludes that they contain the following constituents:—1, Chlorophylle; 2, a soft dark green resin; 3, a brown colouring matter; 4, a yellow colouring matter; 5, gum and nitrate of potash; 6, a bitter principle, maticine; 7, an aromatic volatile oil; 8, salts; 9, lignin. The leaves of the matico are easily reduced to a fine powder, which has the colour of powdered senna. When mixed with any thick vehicle, as syrup, &c., it presents an excellent mode of administering them, though only adapted for extemporaneous prescription; as the essential oil, upon which it is probable much of their medicinal effect depends, would be rapidly dissipated by keeping; the cold infusion, as it extracts all the active principles contained in the plant, seems the best form for obtaining its medicinal properties.§—*Ibid.*

MEDICAL PATHOLOGY AND THERAPEUTICS AND PRACTICAL MEDICINE.'

18. *Case of Suppuration of the Blood, independent of Inflammation.* By J. HUGHES BENNETT, M. D.—The statements of various authors, that pus existed in the blood, independent of any local inflammation, have hitherto been very vague; because no measures were taken to ascertain whether the purulent-looking matter was

* Transactions of the Provincial Medical Association, vol. ii., pp. 347-366.

† Provincial Medical and Surgical Journal, June 18th, 1842.

‡ Medical Gazette, October 6th, 1843, p. 9.

§ Condensed from the proceedings of the Chemical Society.

really pus. The purulent collection found in the heart and blood-vessels by Jardin and Andral, have been ascribed by Gulliver to the mechanical softening of fibrin. Dr. Bennett considered the following case valuable, as it would serve to demonstrate the existence of true pus, formed universally within the vascular system, independent of local inflammation.

CASE. John Monteith, aged 28, was admitted into the Royal Infirmary on Feb. 17, 1845, under Dr. Christison. The leading features in his complaint were the existence of a tumour in the left hypochondrium, which had latterly given him pain. This tumour was ascertained to be owing to enlarged spleen. There was oedema of the lower extremities, but his general health, otherwise, was good. On March 15, he was attacked with febrile symptoms; pulse 110, he was pale, and had slight diarrhoea. March 14.—Fever continues; but there is no prostration. On the 15th he died suddenly.

On examination, four days after death, the blood throughout the body was found to be much changed in the right cavities of the heart, pulmonary artery, and also in the large veins of the trunk; it was firmly coagulated, and formed a mould of their size and form internally. The clot was separated into a red or inferior, and a yellow or superior portion. The latter, when squeezed out of the veins, as was sometimes accidentally done when they were divided, resembled thick creamy pus. On the surface of the brain, the veins and longitudinal sinuses appeared as if partly covered with pus, and partly with red coagulum. The vessels themselves throughout the body were perfectly healthy. The clot was nowhere adherent, but, on the contrary, readily slipped out of the vessel when an accidental puncture was made in it. The liver and spleen were enormously enlarged owing to simple hypertrophy. The former weighed 10lb. 12oz.—the latter 7lb. 12oz.

On examining the blood microscopically, the yellow coagulum was found to be composed of coagulated fibrin in filaments, intermixed with numerous pus corpuscles, which could be readily squeezed out from it when pressed between glasses. When it was unusually soft, the corpuscles were more numerous, and the fibrin was broken down into molecules and granules intermixed with broken pieces of the filaments. The corpuscles varied in size from the $\frac{1}{10}$ to $\frac{1}{5}$ of a millimetre in diameter. They were round, had the cell wall granular, and presented all the appearance of pus globules. That they really were such, was proved by the action of water and acetic acid, the former of which caused them to swell and lose their granular appearance, whilst the latter dissolved the cell wall, and caused a distinct nucleus like that in the pus globules to appear. On stripping off a portion of the pia mater, and examining the capillary vessels of that membrane, they were found crowded with the same corpuscles. This fact was confirmed by Dr. Allen Thomson, to whom a portion of the brain was sent.—*London & Edinb. Monthly Journ. of the Med. Sci.*, June, 1845.

19. *Hypertrophy of the Lymphatic Gland in an Adult.*—A country woman upwards of 30 years of age, was admitted into the wards of M. VELPEAU at *La Charité*, on account of a number of lymphatic tumours which existed in almost every region of the body where lymphatic glands are naturally met with, namely in the axillæ, groins, neck, elbows, legs, and body. In all these regions there are masses,—groups, chaplets of hypertrophied glands, varying in size from an almond to a hen's egg. They roll under the finger, are without pain, or change of colour on their surface. The affection first appeared two years ago, without any appreciable cause. The woman had previously enjoyed excellent health; she is even now robust, and suffers nowhere, except that the tongue is a little white, and the digestive organs occasionally out of order. She says she has lost flesh, but she is still rather stout; the skin has a slightly yellowish tint, but not approaching to icterus; she has perspired copiously through the night for some time past. No one of her family, so far as she knows, has been affected in a similar way, and none of the inhabitants of the country where she resides have anything similar. Her place of residence is well aired, and, from her occupation, she passed most of her time in the open fields. M. Velpeau retained her in his wards as a subject for study; she was put on the extract of walnut for nearly two months; but no favourable change occurred, the health of the patient seeming rather to decline.

So little being known of the diseases of the lymphatic system; we are anxious to record the above case. What is characterized as scrofula in the child, is a complex disease, and cannot be confounded with the above. In this woman nothing is found but general hypertrophy of the glands; the serous membranes are in a good state, the osseous system exhibits no alteration, and there are no knotty cords in the course of the lymphatic vessels, as is the case in some kinds of erysipelas. In the actual state of science, we can only say—there is general ganglionitis, but it does not follow that it is true scrofula, since there are none of its constitutional symptoms. If this diagnosis be correct, hyposthenic remedies, whose action is on the lymphatic system, would be indicated, calomel and hemlock for example. It has been thought that cancer has its origin in chronic lymphatitis. Why then is this woman exempt from cancer?—*Annales de Thérapeutique*, April, 1845.

20. *Intermittent Mental Disorder of the Tertian type, with double consciousness.*—Dr. DAVID SKAE relates, in the *Northern Journal of Medicine*, (June, 1845,) the following extremely interesting case of intermittent mental disorder with double consciousness.

The subject of the case was an unmarried gentleman, in the prime of life, connected with the legal profession, of a leuco-phlegmatic temperament, regular in his habits, which have always been retired, and extremely temperate in his mode of life. His complaint commenced with the usual symptoms of dyspepsia—it then gradually passed into hypochondriacism—and ultimately into its present form, a state bordering between hypochondriasis and mental alienation.

The dyspeptic symptoms became a subject of complaint and solicitation to the patient about 10 or 12 years ago. They appeared to have had their origin partly in habits of over-walking before dinner, so as to produce considerable exhaustion, and partly in habits of sitting up to a late hour engaged in reading or in business. The symptoms gradually increased in severity and obstinacy, it being found quite impossible to induce the patient to break through the habits which he had acquired, or to alter in the least the quantity or quality of the diet to which he had been accustomed from his earliest youth.

To the usual dyspeptic symptoms there gradually succeeded a train of morbid feelings, and ultimately of illusions founded upon them. The distress occasioned by flatulent distension of the stomach, and the painful feelings in different parts of the body, which are its usual concomitants, led the patient to consult many medical men, and use large quantities of medicine, which, as he still persisted in the habits in which his complaints originated, and the diet by which they were excited, rather aggravated than abated the evil. The fugitive pains and uneasy feelings experienced in different parts of the body were spoken of as sufferings of a mysterious and unparalleled kind; they were at one time believed to be wind circulating through the veins, and at another, the whole system was imagined to be charged with water. While under the influence of these impressions, the patient, day after day, would sit for many hours in the water-closet, believing that the water was constantly discharging itself; and at another time, he continued spitting incessantly for many weeks, under the impression that his whole frame was becoming converted into saliva.

Feelings of gloom and despondency were at the same time developed:—the most trifling errors of the past were magnified into crimes of unpardonable magnitude, and the future was contemplated with the utmost dread. He commenced a system of reading the Scriptures, psalms, and paraphrases with great zeal and rapidity; this soon grew into a system of rapidly scanning the pages, and incessantly turning over the leaves, and he persuaded himself that he read the whole Bible through, and all the metrical psalms, once or twice daily. He now sat up the greater part of every night, and lay in bed during the day; and when he went to bed, he carefully surrounded his person from head to foot with Bibles and psalm books.

Under the influence of the bodily distress and mental despondency from which he suffered, he not unfrequently spoke of drowning himself, or of throwing himself over a window, and on several occasions begged earnestly that he might have his razors. A natural timidity of disposition, and a prevailing conscientiousness, pre-

vented this tendency from displaying itself with any seriousness or determination of purpose.

From an early period in the history of this case, it was observed that the symptoms displayed an aggravation every alternate day. This gradually became more and more marked, and for the last 18 months the symptoms above described have become distinctly periodic. On each alternate day, the patient is affected in the manner just described, and will neither eat, sleep, nor walk, but continues incessantly turning the leaves of a Bible, and complaining piteously of his misery. On the intermediate days, he is, comparatively speaking, quite well, enters into the domestic duties of his family, eats heartily, walks out, transacts business, assures every one he is quite well, and appears to entertain no apprehension of a return of his complaints.

What is chiefly remarkable and interesting in the present features of the case, is the sort of double existence which the individual appears to have. On those days on which he is affected with his malady, he appears to have no remembrance whatever of the previous or of any former day on which he was comparatively well, nor of any of the engagements of those days;—he cannot tell whether he was out, nor what he did, nor whom he saw, nor any transaction in which he was occupied. Neither does he anticipate any amendment on the succeeding day, but contemplates the future with unmitigated despondency. On the intermediate days, on the other hand, he asserts that he is quite well, denies that he has any complaints, or at least evades any reference to them; appears satisfied that he was as well the previous day as he then is, asserts that he was out, and that he has no particular complaints. On that day he transacts business, takes food and exercise, and appears in every respect rational and free from any illusions or despondency; anticipates no return of illness, and persists in making engagements for the next day for the transaction of business, although reminded and assured that he will be unfit for attending to them. On those days he distinctly remembers the transactions of previous days on which he was well, but appears to have little or no recollection of the occurrences of the days on which he was ill. He appears, in short, to have a double consciousness—a sort of twofold existence—one half of which he spends in the rational enjoyment of life and discharge of its duties; and the other, in a state of hopeless hypochondriacism, amounting almost to complete mental aberration.

An endless variety of remedies have been used in the treatment of this case, and among others, those which are believed to be useful in periodic affections, but without marked benefit. The patient has obtained considerable advantage from change of scene and exercise in the open air. But the friends by whom he is surrounded, have not sufficient control over him to carry out those regulations as to diet, exercise, habits, and employment, which should form the most essential parts of the treatment; and circumstances have hitherto prevented his being placed under more efficient control.

21. *Case of Ileus—a portion of Intestine discharged by stool.*—The annals of our science contain a large number of cases of intussusception of the intestines, in which the intussuscepted portion has sloughed off, and been discharged by stool; still the following one, related by Dr. NAGEL, of Lemberg, in *Oesterreichische Med. Wochens.*, and copied in the *Gazette Médicale*, 31st of May, 1845, may be read with interest.

K. J., a domestic, 21 years of age, robust, always enjoying good health, except frequent attacks of colic within the last few years, was attacked in the night, 12–13 Feb., 1843, with violent pain in the lower part of the abdomen, accompanied with shivering, frequent vomiting and purging. On admission into the hospital, on the morning of the 13th, he was in the following state: Head hot and painful; tongue foul; thirst; abdomen swollen, and tender to the touch; skin dry; pulse full, hard and frequent; vomiting, with watery stools, tinged with blood. (Antiphlogistic treatment.)

The symptoms continued much the same till the 16th, when they diminished in intensity, and the stools were no longer tinged with blood.

On the 19th, there was violent tenesmus, accompanied, on the 23d, with prolapsus of a portion of intestine, which, however, was easily reduced without causing pain.

On the 26th, the patient, free from fever, and altogether in a satisfactory state, passed by stool, a portion of intestine, 20 inches long, and at some points 2 inches broad; it consisted of a portion of the ilium, the cæcum, appendix vermiformis, the whole of the ascending colon, and a portion of the transverse. The mucous membrane was everted, of a brownish colour, striated with black, especially at the cæcum; it was soft, and easily removed; the peritoneal coat was likewise of a brown colour, and corroded, leaving bare the muscular coat, which was also destroyed at some points; for some days after, there was slight pain at the lower part of the abdomen; but on the 23d March, the patient left the hospital perfectly cured.

22. *Case of Intussusception, in which the intussuscepted portion of bowel sloughed away, and was voided by the Rectum.—Recovery.* J. S. JEAFFERSON, Esq., communicated to the Royal Medico-Chirurgical Society (May 27th, 1845), the case of a youth 17 years of age to whom he was called on the 26th May, 1844. The patient was labouring under general febrile symptoms; there was an anxious expression of countenance; the abdomen not tender on pressure, but becoming tympanitic. Nothing could be retained on the stomach; the matters vomited had a grass-green appearance. There was painful tenesmus, but no evacuations. Calomel and opium, purgatives of senna, croton-oil, &c., with turpentine clysters, were used up to the 28th, without success. On that day, the author considered that decided symptoms of inflammation of the bowel and peritoneum had set in. The belly was generally tender, especially in the left hypochondrium, where a distinct hard tumefaction was observed. Leeches, fomentations, &c., were used in addition to the other means, but no evacuations took place till the 31st, when there were very copious and offensive discharges from the bowels, and the vomiting ceased. From this date the patient gradually recovered. Copious evacuations took place, charged with gelatinous-looking mucus, and on one occasion a small quantity of blood.

On the 8th of June, there was discharged from the bowels what the author supposed to be either a portion of the small intestine, or a cast of it (of coagulable lymph); it was about $2\frac{1}{2}$ or 3 inches in length, and of a tubular form; smelt horribly putrid, and one or two minute points presented the appearance of sphacelus. After this, with some slight interruption, the patient recovered.

The substance voided was examined under the microscope by Mr. Toynbee, who stated that he found cellular tissue, traces of blood-vessels and nerves, and epithelium. Mr. Dalrymple, who also examined it, thought that involuntary muscular fibre might also be detected, but could not speak positively, from the preparation having been placed in spirits of wine for some time.

The author draws attention to one point in the treatment, viz., the abstinence from any active depletion on the 28th, when symptoms of inflammation had decidedly set in. At this period, he observes, a free evacuation of blood would probably have reduced the inflammatory action, and relieved the immediate sufferings of the patient; but it might also have masked the symptoms, and checked the reparative processes of adhesive inflammation, on which the recovery of the patient depended.—*Lond. Med. Gazette*, June 6, 1844.

[In the discussion which followed the reading of this paper, Dr. Webster stated that he had met with an instance in which twenty-five inches of intestine came away, and the patient recovered. In the Edinburgh Medical and Surgical Journal for October, 1835, there is an abstract drawn up by Dr. Wm. Thomson, of 35 cases in which a portion of the cylinder of the intestinal canal had become detached and been discharged by stool. See also the preceding article.]

23. *Sulphate of Bebeanine in Intermittent Headache.*—Dr. GAIRDNER stated to the Medico-Chirurgical Society of Edinburgh that he had recently been very successful in treating a case of intermittent headache with the sulphate of bebeanine. The subject was a young and recently married lady. There were some reasons to suspect that she might be pregnant. The fits of pain were of daily recurrence and came on nearly at the same time. The pain when at its greatest height was excruciating. The paroxysm was succeeded by an interval of total exemption from pain. He proposed the quinine; but found that his patient had the greatest objection to it, on account of the disagreeable sensations in her head which she

had experienced from its use on a previous occasion. He was unwilling to employ arsenic, on account of the suspicions of pregnancy, and he therefore ordered pills containing three grains of sulphate of bebeerine in each. Of these she took three, sometimes four, each day, in the intervals between the paroxysms, with the effect of immediately diminishing the pain, and of putting an end to the disease in about three or four days.—*Lond. & Edin. Monthly Journ. of Med. Sci.*, June, 1845.

24. Syphilitic Chlorosis and its Treatment. By M. RICORD.—It is often erroneously supposed respecting venereal diseases, that these consist of a single disorder, which ought constantly and exclusively to be met by one only remedy, viz., mercury.

The following remarks of M. Ricord tend to combat this error, whilst they at the same time enrich the special therapeutics of these diseases, with a mode of treatment, the good effects of which have been extensively witnessed in the practice of the author.

M. Ricord first lays down the principle, that one of the first effects by which the syphilitic diathesis manifests itself, is an invariable alteration of the blood. But does this alteration consist in an increase or diminution of the globules? This question regulates all the others. In the numerous researches instituted in those attacked with syphilis, along with M. Grassi, chief pharmacien to the Hospital du Midi, M. Ricord constantly found that the number of globules was diminished in various proportions, and at times to such a degree that it attained the maximum of diminution observed in anemia. It is to this impoverished state of the blood that M. Ricord applies the term syphilitic chlorosis; it has numerous relations with the other species of chlorosis. To it, in the first place, must be attributed that peculiar colour of the skin observed in those affected with constitutional syphilis. As in chlorosis, the physical and moral state of depression indicates disorder of the circulation; the bad complexion and dull eye clearly show that the blood no longer possesses its healthy properties.

Syphilitic chlorosis generally exists previous to the appearance of any secondary or tertiary symptoms. Its principal characteristics, besides the general aspect which we have just noticed, are a state of extreme lassitude, pains, with exacerbations at night, in the neighbourhood of the joints, but without swelling or change of colour in the skin, and usually neither produced nor aggravated by pressure. Headache, neuralgia of the fifth pair, and paralysis of the facial nerve, are also pretty constant symptoms of this state. Alopecia, enlargement of the posterior or lateral cervical glands, or of the mastoid glands alone, complete the series of phenomena, which are rarely preceded or accompanied by a febrile state.

This peculiar state of the blood presents an element of the greatest importance when viewed as an indication in regard to treatment, becoming continuous and aggravated when the syphilitic infection gives rise to secondary or tertiary symptoms; it may continue in different degrees, after their disappearance, or under the influence of modifications accruing in the system, either from treatment or any other cause.

The first conclusion to be drawn from these considerations, is, that syphilis being an anemic disease, or at all events complicated with anemia, the antiphlogistic method of treatment is a dangerous one, laying aside any partial or local inflammatory phenomena, which may accidentally require sanguineous depletion.

The second conclusion is the necessity of a restorative diet, and the application of those special remedies, which experience has demonstrated to be efficacious in chlorosis.

"The treatment which I have adopted," says M. Ricord, "consists in the combination of preparations of iron and mercury, either for the chlorosis, or other symptoms, provided there exists no counter indication. In general I give the preference to the pills of Vallet, in the dose of 6 to 18 a-day. I prescribe, at the same time, the proto-ioduret of mercury, in the dose of from 5 to 30 centigrammes, along with a decoction of hops or soap wort, which, in my opinion, is much superior to sarsaparilla. For the disorders arising during the transition from the secondary to the tertiary symptoms, mercurials combined with the ioduret of iron, or still better, the ioduret of potassium, are the most efficacious for altering the state of the blood. The same result may be obtained from the ioduret of iron or ioduret

of potassium alone, in the tertiary symptoms."—*Lond. & Edin. Monthly Journ. of Med. Sci.*, March 1845, from *Gazette Médicale*, Nov. 1844.

25. *On the co-existence of Granular Disease of the Kidneys, with Pulmonary Consumption ; and on the influence of the Strumous Diathesis in predisposing to the Renal Disease.* By THOMAS BEVIL PEACOCK, M. D.—Dr. Bright, in the notes to his tabular statement of the morbid appearances in 100 cases of Granular Disease of the Kidneys, occurring in connection with albuminous urine,* has remarked, that "the instances in which phthisis, or any form of scrofulous disease, has been connected with the renal affection, have been decidedly rare, so that in only four cases has recent phthisis developed itself; and what is somewhat remarkable, in more than double that number the disease seems to have made a certain inroad upon the upper lobes of the lungs, and then to have become quiescent, or to have entirely subsided, from which we should perhaps be inclined to infer, that, so far from the diseases being associated, the condition of body, in this form of renal disease, is unfavourable to the existence of phthisis, or certainly that it is not peculiarly apt to occur in scrofulous constitutions." These views have not been confirmed by the experience of other observers. Dr. Christison† says, "I have very little hesitation in putting down the scrofulous diathesis among the predisposing causes of granular disorganization of the kidneys. In repeated instances I have been led by the supervention of œdema during phthisis, to examine the qualities of the urine, and, although the result has not been invariable, still in a great proportion of cases of the kind, the secretion has been found to possess the properties essential to the renal disease. In repeated instances the diagnosis during life has been confirmed by inspection of the body after death. On diverse occasions, too, the kidneys have been discovered on dissection in an advanced state of granular disorganization, when the condition had not been attended to during life, and when, nevertheless, from the state of the urine in the bladder, there could be no question that the pathognomonic characters of the disease might have been detected, had not the attention been withdrawn from them by some urgent symptoms."

Rayer,‡ in alluding to the remarks of Dr. Bright above quoted, expresses the concurrence of his experience and views with those of Dr. Christison ; and states, that he has in repeated instances found the urine become albuminous during the progress of phthisis, with or without the supervention of dropsical symptoms, and has detected, after death, the characteristic renal disorganization. Martin-Solon—though he found the lungs tuberculous in four out of ten dissections of persons who had sunk under granular disease of the kidneys—regards the two affections as only accidentally co-existent.§ Dr. Osborne, on the other hand, states, that of 36 cases of renal disease with albuminous urine, which had fallen under his notice, four originated in scrofula; and in one of the only two dissections of cases of renal affection producing dropsy, which he relates, the lungs were in an advanced state of tuberculous disease.

These quotations are sufficient to show the difference of sentiment which exists among writers on the Granular Disease of the Kidneys, as to the co-existence of strumous diseases with that affection, and the influence which the scrofulous constitution exerts in its production. The data given in the following paper were collected for my own satisfaction, but, as the question to which they refer is both interesting and important, it is conceived that they may be worthy of publication. The points which I shall endeavour to illustrate, are,—*first*, the frequency of the occurrence of tuberculous affections of the lungs, in conjunction with decided granular disease of the kidneys;—*secondly*, the relative frequency and importance of the different visceral complications in that affection;—*thirdly*, the relation as to priority between the granular affection of the kidneys, and the tuberculous disease of the lungs;—and, *lastly*, the frequency of the granular disorganization as a secondary affection in phthisis, and the influence which it exerts on the progress of the pulmonary disease.

* Guy's Hospital Reports, vol. i. 1836, p. 381.

† On Granular Degeneration, pp. 112, 113.

‡ Sur les Maladies des Reins, t. ii. p. 313.

§ De l'Albuminurie, p. 238.

In these inquiries I shall confine myself to the results obtained by dissection,—M. Rayer having shown—as I have myself seen—that the urine becomes more or less albuminous, in certain forms of secondary tuberculous deposition in the kidneys, or mucous membrane of the urinary passages; and hence, that in cases of phthisis, the diagnosis of granular disease of the kidneys from the state of the urine, is liable to fallacy. The data for the determination of these questions, I have drawn from the paper on Diseased Kidneys connected with albuminous urine, by Dr. Gregory,*—the work of M. Rayer,—and from a considerable number of unpublished cases examined and recorded by myself, in the 7th and 8th volumes of the Register of Dissections of the Royal Infirmary of Edinburgh.

I. In Dr. Gregory's paper, are detailed the particulars of 41 examinations of persons in whom decided granular disease was detected after death, and in the majority of whom it had also been diagnosed during life. Of these cases the condition of the lungs is reported in thirty-one, of which eight presented advanced tuberculous disease; and in a ninth case, a few tubercles were found at the apex of one lung.

M. Rayer has published the dissections of 45 cases of granular disease, exclusive of those of diseased kidney connected with the dropsy consecutive to scarlet fever, and in all of these the state of the lungs is recorded. Of the 45 cases, 12 presented extensive tuberculous disease in the lungs, and in 5 others there existed fewer recent tubercles in the upper portions.

In the Register of Dissections performed by myself at the Royal Infirmary of Edinburgh, in 1842 and 1843, I find recorded the results of examination in 42 cases of decided granular disease—in the larger proportion of which, the affection had been detected during life. In 40 of these cases the condition of the lungs is expressly given; and of these in 6 they were extensively affected with tuberculous deposition, and in four others there existed fewer recent crude tubercles. Placing together these observations, which do not differ more widely than will always be the case in limited series of facts, it results, that of 117 cases of decided granular disease of the kidneys, extensive tuberculous affections of the lungs existed in 26, and a smaller number of tubercles of recent origin in 10 others; or, out of the 117 cases, 36, or nearly one-third (30·7 per cent.), contained more or less extensive advanced tuberculous deposition in the lungs, a proportion much larger than that already quoted, as deduced by Dr. Bright from his table: it must, however, be observed, that, as in 11 of the cases included in his table, the condition of the lungs is not reported, his statement refers to only 89 cases.

II. The relation, however, which exists between the renal and pulmonary affections will be rendered more apparent, by a comparison of the relative frequency of the tuberculous affections of the lungs, to the other diseases of those organs, and of the heart and liver, which occur in the bodies of persons who have died of renal disease.

The cases which I have before analyzed will furnish the data for this comparison.

Of the cases related by Dr. Gregory, the condition of the heart is reported in 21, of which 7 only presented decided disease.

In the reports of M. Rayer, the condition of the heart is stated in 43 cases, and of these it was flaccid in 21, and 8 others displayed only some slight degree of enlargement with thickening or opacity of the pericardium or endocardium; so that the instances of decided disease amount to only 14, of which 2 displayed recent false membranes on the pericardium, and 12, more or less extensive hypertrophy, with or without thickening and opacity, or actual disease of the valves. Of my own cases, the state of the heart is expressly reported in 38. It was found healthy in 17, and in five other cases the only abnormal condition was slight increase of size, with or without thickening and opacity of the valvular folds of the endocardium; of the remaining 16 cases, in 2 there existed recent pericarditis; in 9 hypertrophy and dilatation of one or both of the ventricles, with, in

* Edinburgh Medical and Surgical Journal, vol. xxxvi. 1831, p. 315. I have not included in my analysis the small number of cases reported by Dr. Christison, as several are also published by Dr. Gregory, and in others the condition of the lungs is not reported.

some cases, thickening and opacity, but no incompetency in the valves; and in one of these cases the organ had also undergone the fatty degeneration: In four cases there existed aggravated valvular disease, and in 1 true aneurism of the septum ventriculorum. Thus, of the 102 cases of granular disease, in which the state of the heart was examined and recorded, that organ was decidedly diseased in only 33, or including the cases of recent pericarditis, in 37, or 36·4 per cent.

The condition of the liver is reported by Dr. Gregory in 29 cases, of which number it is stated to have been healthy in 12, and more or less extensively diseased in 17. Of the latter class, however, in several instances there seems to have been only trivial alterations of size or colour; and probably, in not more than 8 or 10 cases did there exist organic disease.

In 40 of M. Rayer's cases, the state of the liver is described. In 13 it was healthy; in 7 others it was only more or less engorged, giving rise to slight alterations of size or colour; and in two cases the peritoneal surface was covered by recent lymph, though the texture of the organ was healthy. It thus appears, that not more than 18 cases presented important changes. In 7 of these, there existed marked increase of density in the organ, with or without alteration of size and colour; in 3, there was great enlargement; in 3, cirrhosis; in 3, the organ was fatty; and in 1 it contained tubercle. In one case the nature of the disease is not stated.

In the cases taken from the Register of Dissections at the Edinburgh Infirmary, the condition of the liver is reported in 30. In 11 it is stated to have been found healthy; in 10 others the only alterations were dependent on the degree of engorgement from external causes, combined in 3 cases with thickening, opacity, or adhesions of the peritoneal coat; and in an 11th case, while the substance of the organ was healthy, the serous covering had been implicated in general peritonitis; so that the viscera was organically diseased in only 8 cases, of which 5 were instances of adipose degeneration, with greater or less enlargement; in 2 the organ contained tubercles, and in one there existed early cirrhosis.

The liver was, therefore, organically diseased in 36 of the 99 cases examined, or in 36·3 per cent.

The lungs were examined and reported in 31 of Dr. Gregory's cases, of which 22 displayed different forms of disease, and 8 were decidedly, and one slightly, affected with tuberculous deposition. M. Rayer found both lungs entirely healthy in only 4 cases, out of the 45 which he has reported. In 8 others, however, the only change was more or less decided congestion, dependent on the mode of death or compression from pleuritic effusions, so that the cases of actual disease amount to only 33, and of these the lungs were inflamed and hepatized in 7 cases; the mucous membrane of the bronchi was injected, and the tubes contained much secretion in 9; there existed extensive tuberculous disease in 12, and a few recent tubercles in 5 others.

Lastly, of the 41 of my own cases in which the condition of the lungs is recorded, they were found entirely healthy in 2, and in 10 others presented only compression from pleuritic effusions, or slight degrees of congestion, œdema, or emphysema; and in one the tubes and cells contained blood, from the bursting of an aneurism. There remain, therefore, only 29 cases of decided disease; in 10 of which there existed pneumonic consolidation; in 9, injection of the mucous membrane of the bronchi, and much muco-purulent fluid in the tubes, with considerable congestion or œdema; and in 6, extensive, and in four others slighter, tuberculous disease.

Therefore, of 117 cases in which the lungs were examined, 84 presented different forms of disease, or 71·8 per cent., and 36, or 30·7 per cent. more or less extensive tuberculous disease.

It thus appears that

			per cent.
The heart	was examined in	102 cases, and found diseased in	37, or 36·4
The liver	"	99 "	36, or 36·6
The lungs	"	117 "	84, or 7·18
		"	Phthisical in 36, or 30·7

Or otherwise, that the diseases of the heart and liver were of equal frequency, and occurred in about one-third of the cases; while the lungs were effected in different

ways in two-thirds of the cases, and were tuberculous in nearly one-half of these, or in scarcely a less proportion than the whole of the several affections of the heart and liver. This very large proportion afforded by the tuberculous diseases of the lungs, in so considerable a number of cases, can, I conceive, scarcely be regarded as accidental, and renders the conclusion almost necessary, that the causes predisposing to the renal and pulmonary affections are closely allied.

III. It might, indeed, be supposed, that the tuberculous deposition in the lungs is secondary to the renal disorder, being superinduced by the consequent depravation of the constitution, as we find to be frequently the case in chronic visceral diseases. There seems, however, every reason to believe, that tuberculous affections of the lungs are very rarely secondary to the granular disorganization of the kidney. Dr. Christison states, that he has not met with a single instance in which this appeared to have happened; and M. Rayer, while he states that such cases occasionally occur, yet admits their extreme rarity. On referring to the notes of nine of my own observations, in which phthisical and granular disease co-existed, and in which the condition of the kidneys and lungs is fully described, I find that in one case the affection of the kidney was unequivocally primary and predominant;—the kidneys were externally of a pale yellow colour and irregular shape, and internally they presented an extensive small granular deposit in the cortical portion, and between the tubuli, entirely replacing the natural striated texture; while the lungs only contained a small number of gray tubercles in the upper lobes. In a second instance, in which the patient was cut off by an attack of acute pericarditis, the kidneys were found in an advanced state of disease; their cortical portions being infiltrated with a whitish-coloured deposit, interspersed with small yellowish tubercular bodies, while the disease of the lungs was in an early stage—those organs containing only a moderate deposit of yellow and gray tubercles, chiefly in the upper lobes.

In two other cases, the renal was more advanced than the pulmonary disease; but in these the visceral affections were apparently secondary;—in one case, to caries of the tarsus, for which a partial amputation of the foot had been performed; and in the other, to a venereal taint in the constitution,—the osseous system being throughout extensively diseased.

In a fifth case, there existed advanced granular disorganization, the kidneys presenting a mottled surface, and, on section, being found to contain a copious granular deposit in the striated portion, while the lungs contained old and recent tuberculous disease, in the form of cretaceous masses in the upper lobes and bronchial glands, mixed with yellow and gray tubercle in the crude state; so that the respective dates of the pulmonary and renal affections are doubtful.

In the remaining four cases, the pulmonary disease was evidently primary. The disorganization was in all extensive, and the tubercle had softened, giving rise to caverns in one or both lungs. And lastly, in four other cases, not previously referred to, there existed renal disease in a recent stage, in conjunction with advanced tuberculous disease of the lungs.

It appears, therefore, that of thirteen cases out of fourteen—the whole of those in which more or less decided tuberculous disease of the lungs and granular disorganization of the kidneys co-existed—the priority of the affection was doubtful in one: in two, the disease of both viscera was secondary to other chronic affections; and in one, or perhaps two, the disease of the kidneys was the primary affection; while in eight cases, the lungs were obviously diseased, primarily and predominantly.

That the lungs should, in the renal disease, be less frequently the seat of secondary tuberculous affections than in most other chronic diseases, may probably be ascribed to the frequency with which those labouring under the affection are cut off by the supervention of acute inflammatory action in the several viscera or serous membranes. It is improbable that the different results obtained by Dr. Bright from the cases which he has analyzed, and those of other observations, confirmed by the facts I have brought forward, may be ascribed to his having included in his table only such cases as had presented predominant signs of renal disease during life, and in which the tubercular disorganization was consequently only secondary, and not the whole of the cases in which decided granular disease was found on examination after death. The importance, however, which he

attaches to the occurrence in some of his cases of tubercles of old date, and in a quiescent state, in the upper lobes of the lungs, as evincing that the existence of granular disease is unfavourable to the progress of phthisis, is, I venture to suggest, founded on a misapprehension of the frequency of the occurrence of these bodies in the lungs of persons who die, from whatever cause, in the middle or after periods of life,—a frequency which the observations of MM. Rogée and Boudet in Paris, and of Dr. J. H. Bennett in Edinburgh, show to be greater than would be anticipated by those whose attention has not been specially directed to the subject. The former* found cretaceous masses in the lungs in 51 out of 100 persons examined, and in 16 they were numerous, and of considerable size. M. Boudet,† in 116 persons between 15 and 76 years of age, met with tubercles in the lungs, altogether free from recent action, in 61; and Dr. Bennett‡ in 16 out of 73 examinations. It cannot, therefore, be matter of surprise, that these bodies—regarded by these writers, as well as previously by Drs. Home and Carswell, as affording decisive evidence of the curability of phthisis—should have occurred in seven or eight cases of granular disease, out of the 89 reported by Dr. Bright. The ages of only four of those in whom they were found are stated in his table; but all these are at periods of life at which the tuberculous bodies, more or less completely transformed into cretaceous matter, are of constant occurrence.

In addition to the evidence that the strumous diathesis powerfully predisposes to the development of the granular disease of the kidneys, founded on the much greater frequency of tuberculous disorganization of the lungs, than of any other single form of visceral affection in the bodies of those who exhibit decided renal disease, whether primary or secondary, still further proof of its influence is afforded by other affections with which the renal disease is often combined. Thus I find of the cases where the lungs were free from tubercle, one patient laboured under strumous ulcers; a second, under chronic peritonitis, and the peritoneum was studded with small granular tuberculoid masses of lymph; in a third, there existed circumscribed peritoneal and pleuritic abscesses, bounded by fibro-cartilaginous false membranes, and containing sero-purulent fluid mixed with caseous matter; in a fourth case, the sternum and ribs were carious, and had given rise to extensive abscesses, and other instances of the same kind might be quoted. In several of the cases also in which the lungs were pneumonic, the appearance of the consolidated portions was different from that of ordinary hepatization. They were usually firm, exuded very little fluid on compression, were of a pale buff colour, very distinctly granular when torn, and presented a condition which might be regarded as intermediate between the pneumonic condensation and tuberculous infiltration.

In conclusion, we have seen that pulmonary consumption very frequently co-exists with the granular disorganization of the kidneys, and that, so far from being an accidental complication, supervening during the last stages of that affection, the pulmonary usually precedes the renal disease. We have also found that in cases where the lungs are healthy, there frequently exist other proofs of the tuberculous diathesis, and we can, therefore, scarcely withhold the conclusion that this constitution very powerfully predisposes to the renal disorganization. The diseases dependent on the scrofulous constitution being most frequent during infancy and adolescence, it follows, that, at these periods, the renal and strumous affections should most generally co-exist. This inference is confirmed, so far as relates to the coincidence of phthisis and renal disease, by the analysis of the cases before referred to. Of the 116 persons whose ages are given, 22 are stated to have been of 25 years of age and under, and of these 10, or nearly one-half (45·4 per 100), presented more or less extensive and advanced tuberculous disease of the lungs; while of the remaining 94, 25 only, or rather more than a fourth (26·5 per 100), were similarly affected. To say, however, that the connection between the comparatively few cases of granular disease of the kidneys, occurring during early life, and the strumous diathesis, is so invariable as supposed by Dr. Christison, may perhaps be more doubtful.

* C. Rogée, Archives Générales de Médecine, 3 serie, t. v. p. 191.

† Comptes Rendus, t. xvi. 1843, p. 143.

‡ Ed. Med. and Surg. Journal, 1845, April.

IV. The 10 cases of more or less advanced granular disease in which the affection was evidently secondary to phthisis, occurred out of 59 cases of that disease in which the condition of the kidneys is expressly noted, being thus in the proportion of one-sixth, or 116·7 per cent. Of 40 cases of consumption examined and recorded by my predecessor, Professor Reid, of which I possess abstracts, there were 6 in which disease of the kidneys was diagnosed during life, and found to exist after death; and in 4 other cases, in which the condition of the urine does not appear to have been investigated during life, the organs were found decidedly granular;—being thus one-fourth of those examined. In several of the cases examined, both by Dr. Reid and myself, the condition of the kidneys was doubtful. Dr. Home, in his *Statistical and Pathological Report on Phthisis*,* states that the kidneys had undergone the granular disorganization in 4 cases; but as he has not reported the condition of these organs in his table, we are unable to ascertain the proportion which these bore to the whole of those examined.† The granular disease of the kidneys seems to be a more frequent complication of phthisis than the deposition of tubercle in those organs. Dr. Home did not find tubercles in the kidneys in any of the subjects which he examined; of the cases reported by Dr. Reid, 3 only appear to have been so affected; and in the observations which I have myself made, tuberculous depositions were found in the kidneys in only 6 or 10·1 per cent. The renal complication would therefore appear to occupy an intermediate position, as to frequency, between the almost constantly occurring secondary affections of the intestinal follicles, and of the mucous membrane of the larynx and trachea, and the depositions of tubercles in the viscera, which, after adolescence at least, are extremely rare.‡

* Edinburgh Medical and Surgical Journal, vcl. xlix. p. 1.

† It is curious, notwithstanding the evident frequency with which the renal disease occurs as a secondary affection in pulmonary consumption, that no allusion should be made to the subject by M. Louis, in the last edition (1843) of his *Recherches sur la Phthisie*.

‡ From an analysis of 97 examinations of phthisical subjects performed by myself, I find the relative frequency of the several secondary affections to be as follows:—

The intestinal follicles contained yellow tuberculous matter, or were ulcerated in 85·3 per cent.

The mucous membrane of the larynx, or trachea, was found ulcerated in 70 per cent.

A larger or smaller number of tubercular masses were found imbedded in the substance of the kidneys, or in the mucous membrane of the pelvis and ureters in 10·1 per cent.

Tubercles were imbedded in the substance of the liver in 3·1 per cent.

" " " of the spleen in 1·9 per cent.

" beneath the attached pericardium in 1·2 per cent.

The substance of the heart is very rarely the seat of any heterologous deposit, and the deposition of tubercle in this situation seems especially rare. In the case here referred to, there was a solitary mass of softish yellow tuberculous matter beneath the pericardium covering the right ventricle. I have seen one other instance in which numerous masses of tubercle, varying in size from that of a pin's head to a split-pea, had their seat apparently either in the sub-serous cellular tissue, or on the surface of the pericardium. This was in the case of a female, 28 years of age, whose lungs did not contain tubercle, though the bronchial glands were extensively diseased. This case forms almost the only exception which, out of several hundred examinations, I have found to the general law laid down by M. Louis, that if, after the age of 15, tubercles exist in any organ, they will also be found in the lungs.

The proportion of cases of phthisis in which the renal complication occurs, appears, at first sight, to associate that change with the fatty degeneration of the liver, which, from M. Louis' statement, occurs in France in about one-fourth of the cases, or in 40 out of 120. That the latter affection can only be regarded as accidental, is, however, shown by its very much less frequent occurrence in this country:—thus, in the cases of phthisis examined by Dr. Reid, of which I possess notes, the liver is reported to have been fatty in only 5 out of 35 cases, and in my own cases, in only 8 out of 63. Further investigations have also shown, that though, as observed by MM. Louis and Bizot, it is most frequently found in persons who have died of phthisis, and in females, it also occurs in those who have sunk from other chronic diseases, and in both sexes.

In the whole of the cases in which the granular disease of the kidneys occurred as a complication of phthisis, the tubercle had softened, and given rise to caverns—in 3 instances in one lung only, in the remaining 5 in both.

In 4 cases, there existed more or less extensive recent pneumonic condensation in one or both lungs, and in 2 the pleura was also found covered by recent membranous exudations, and its sac contained sero-purulent fluid. In a 5th case there existed copious muco-purulent secretion in the bronchial tubes, and the mucous membrane was much injected. In 7 cases the solitary and aggregate glands in the intestines were tuberculous, and the mucous membrane more or less extensively ulcerated, and in one of these there was also recent peritonitis, though no perforation of the canal was detected.

In one case, there was extensive ramollissement of the central parts of the brain, connected with paralysis, first affecting the right side of the body, and subsequently both sides.

In one case, there was disease of the mitral valve, with hypertrophy, and dilatation of the heart.

In 6 cases, the serous sacs contained more or less fluid, and the cellular membrane was edematous.

In 2 or 3 cases, the fatal event was ushered in by delirium and coma, and might be regarded as directly resulting from the imperfect performance of the functions of the kidneys.

We see, therefore, that the supervention of the renal disease during the progress of pulmonary consumption, both by the great liability which it induces to inflammation of the parenchymatous viscera and serous sacs, and also by the direct effect of the elements of the arrested renal secretion, tends very materially to add to the severity, and hasten the progress of the pulmonary disease.—*Lond. and Edin. Monthly Journ. Med. Sci.*, Aug., 1845.

26. Cyanosis.—M. ABERLE, of Vienna, gives the following conclusions as the result of the analysis of 180 cases of cyanosis.

In 100 hundred cases there was a defect in the partition of the ventricles. There was also, in 87 of these cases, an abnormal communication of the ventricle, with the aorta; in 22, the foramen ovale was closed, and in 65, it was open. In four cases only, the pulmonary artery issued from both ventricles. In the 87 cases in which the aorta arose from both ventricles, the pulmonary artery was 37 times strictured, or even quite closed. Of these 180 cases, two-thirds were of the masculine sex. The duration of life in cases of this disease is indicated by the following list:—

Death occurred, in the first twenty-four hours, in four cases; in the first fortnight, in sixteen; before the end of the first month, in four; from the first to the second month, in seven; from the second to the third month, in six; from the third to the sixth month, in eight; from half a year to one year, in twelve; from one year to two years, in seven; from two years to three, in nine; from three to six, in eleven; from six to eight, in eleven; from eight to eleven, in thirteen; from thirteen to sixteen, in twelve; from sixteen to twenty, in eight; from twenty to twenty-five, in ten; from twenty-five to thirty, in six; from thirty to thirty-five, in five; from thirty-five to forty-five, in five; from forty-five to sixty, in four; at eighty, in one. In ten cases, the age is not indicated.—*Lancet*, August 9, 1845.

27. On Cirrhosis of the Liver. By D. J. CORRIGAN, M. D.—[This disease, to which the term cirrhosis of the liver has of late years been applied, consists in a subacute or chronic inflammatory affection of the cellular tissue which forms Glisson's capsule, and which, as is well known, is intimately distributed through the organ, giving an investment to each acinus, and affording a bed for the ramifications of the blood and other vessels peculiar to the hepatic system. The consequence of this inflammation, as in the cellular structure of other parts of the

The renal disease would indeed appear in this country to exert some influence over the fatty degeneration of the liver occurring in phthisis, as of the 8 cases in which that change had taken place, 5 were cases of renal complication, and in one of the remaining 3, the condition of the kidneys is not stated.

body, is contraction, by which the glandular structure is irregularly displaced and compressed accordingly as this contraction varies in extent, and the blood-vessels and biliary ducts are more or less obstructed. When this pathological condition exists in a high degree, it constitutes the granular or hob-nail liver. The secondary effects of the lesion are of a very severe character, and are those which might be expected from the obstruction which exists to the course of the portal blood on the one hand, and of the biliary secretion on the other. They are jaundice and dropsy of the peritoneal cavity, with all the varied symptoms which arise from imperfect digestion and assimilation. This condition of the liver when once established, is as far as we know incurable, and as its initiatory symptoms are little understood, it too often gains a footing before any effectual means are taken to arrest its progress. For this reason we consider that the following remarks of an eminently practical physician, are worthy of special remembrance.]

Symptoms of first stage of Cirrhosis. A man comes to consult you, who has been ailing with, what himself and friends term, colic pains—these are generally felt at, or about, four or six hours after dinner; so it is nothing unusual, if he has dined about five P. M., for him to be awoke from sleep by an attack of these pains. They are accompanied in general by quick pulse, from eighty-six to ninety, vomiting, constipation, and some slight degree of fever; under the use of some stimulant, taken internally, joined to the administration of a laxative clyster, this attack is removed; sometimes the patient attributes this train of symptoms to errors in diet, but after some short time they come on, when nothing of an injurious nature has been taken. According as the disease advances, you have these “colic” fits more frequent, the vomiting is more intense, the pulse is quicker—this may or may not be so, it is immaterial; the skin is dry, the tongue is red, and smooth in the centre, presenting an appearance as if the papillæ had been removed from thence; in most cases there is pain felt at the top of the right shoulder, and in all a degree of jaundice, very slight indeed, is visible, which, however, is much better marked if you examine the conjunctiva, having previously turned out the lower lid. The jaundice in this disease comes on gradually. With regard to the pain at the top of the right shoulder, which as you know, has been set down by the old writers as a sign of hepatic disease, I must confess myself completely ignorant as to its cause. As to the value which is to be attached to it, numerous examples of this disease in which it has been present, lead me to look upon it as a very important item to be taken into account in coming to a diagnosis. In this stage of the disorder, along with the symptoms just enumerated, there is some slight pain present in the region of the liver and duodenum. But the most attentive and careful examination cannot detect the slightest alteration in the liver itself. The stools at this period, along with the usual feculent matter, are loaded with a quantity of mucus; and are sometimes streaked with blood. Here we must stop for a few moments to ask ourselves, what do the above-named symptoms denote? We have pain simulating that of colic, accompanied with tenderness of the right side; vomiting; tongue smooth and red, seeming as if its central papillæ had been removed; quickened pulse at ninety-six; dry skin; pain at top of right shoulder; and, lastly, passage of feces, loaded with mucus and tinged with blood. Do they denote any intestinal affection? Not dysentery. For though we have mucus stools, streaked with blood, yet we have no tenesmus. The colon is not engaged; were it so we should have diarrhoea. We must, therefore, proceed higher up the intestinal tube to search for the *locale* of the disease. This, I am inclined to believe, is the duodenum. This opinion I have been led to form from a careful consideration and comparison of the above symptoms, which, as I think, are nothing more than the signs of gastro-duodenitis, or duodenitis itself. And physiology explains to us how duodenitis may cause disease of the liver; it teaches us that diseases of membranous structures, adjoining which are glands that open on the above tissues by means of ducts of similar texture as the membranes in question, are liable to extend their action to the glands which open on such diseased membranes, or the glands may become sympathetically affected. We see this exemplified in affections of the mucous membranes of the intestines, which frequently involve the glands of the mesentery in the existing mischief. This disease of cirrhosis I would look upon merely as the consequence of duodenitis, and we shall

presently find another argument in favour of the opinion as to the gastric origin of the disease in question, in the fact, that the medicines we find most serviceable in removing certain functional diseases of the digestive organs, are those, which in the first stage of cirrhosis, have also been found most productive of benefit to our patient.

Treatment.—The most essential preliminary to the successful medical management of your patient is an injunction on him to refrain sacredly from every description of stimulant, such as ale, porter, wine, &c. Such a prohibition will be the more necessary, because from the habit of taking stimulants of the above class during the pain, which most probably has been indulged in, and which might have been erroneously deemed capable of relieving the pain, your patient might fancy himself benefited by them, or at least, that they were not productive of injury to him.

Such an idea would be a most fatal one to act upon: because any trifling remission of pain produced (if at all) by their use, would be sure to be followed by an increased intensity of all the previous evils. All errors and excesses in diet must be religiously spoken against also; and the same veto must be placed upon any articles of food which the patient might previously have found prejudicial, though tempting. While you restrain him thus, you will take care that his diet is one of a sufficiently nutritious character, comprising, as it may, a light farinaceous milk diet, with a proportion of animal food, suitable, both in quantity and quality, to the enfeebled energies of the stomach and digestive apparatus. At the same time that you lay down these rules for his guidance, acquaint him fully with the peculiar and precarious situation in which he is placed,—a situation from the inevitable fatality of which, he cannot have the slightest chance of escaping, unless he implicitly adhere to your *dicta*. Another, and a most particular object for you to enforce all through, is the necessity which exists of your patient breathing as pure an air as possible. With men of business, who consult you at the commencement, such a thing could not be practicable, implying, as it does, an entire abandonment of business. Where circumstances forbid this, you must see that your patient's nights, *at least*, are spent in the country; without this precaution, all your remedial efforts will be unavailing. Indeed, it is astonishing to witness the wonderfully restorative effects which a residence in the country produces in persons labouring under this disease. Before a month has rolled over in the country, the rheumatism, as the pain at the shoulder is called, will have completely disappeared from persons who had been doctoring themselves unavailingly in town, with plasters, liniments, &c., for three, four, or six months previously: the pulse becomes slower, the tongue moist, the appetite becomes much improved: in fine they quickly become all but restored to their former health, under the conjoint good effects of pure country air and appropriate medicines. As regards the treatment "paroxysmo instantे," I shall not detain you by entering minutely into its details. It will suffice me to mention that counter-irritation by spirits of turpentine (in the manner previously directed under the head of bronchitis) over the seat of pain, the exhibition of one or two grains of powdered opium, with calcined magnesia, in a draught, will invariably, in every case, be quite effectual in removing it. In such cases be not misled by the patient's statement of his having derived relief from stimulants on former occasions. Do not have recourse to them, though they may have been sanctioned by prior medical advice.

Now, with regard to the radical treatment. Your first step should be the application of 10 or 12 leeches on, or the abstraction, by cupping, of $\frac{3}{4}$ viij or $\frac{3}{4}$ x of blood from the usual seat of pain. The cupping over the liver and duodenum may be repeated once a week for three, four, six, eight, or nine times, as the severity of the case may seem to demand. Here it would not be advisable for you to take away blood in any large quantity, as the persons in whom the disease generally appears, are not those who would bear with impunity such large evacuations, being for the most part, persons of constitutions naturally weak and delicate. After the topical bleeding, counter-irritation should be directed to be sedulously employed over the surfaces covering the inflamed organs, and for this purpose I do not know of anything better than the unguent. antim. tart.; the use of which may alternate with the bleeding. Along with these topical means, you will have to employ constitutional ones, those which are generally selected to subdue inflam-

mation. Direct for this purpose, the administration of mercury, combined with opium. Of this mineral, I invariably select the simplest preparations, such as iodium hydrarg., or the hydrarg. c. cretā. The administration of this mineral will require to be continued until its effects are produced, namely, gentle ptyalism. This must be kept up for a period of a fortnight or three weeks. Severe salivation, I reckon to be uncalled for here, and likely to be productive of injury rather than benefit, for the same reasons which I have urged against large bleedings, namely, its tendency to increase existing debility. After the mercury has done its work, you will very advantageously now prescribe the use of sesquinitrate of bismuth, a medicine, which, (although I do not think it possessed of peculiar or specific effect on the liver), in the present disease is eminently serviceable. The combination which I am in the habit of prescribing for this purpose consists as follows:—R.—Ferri cum saccharo; Sodæ bicarbonat., æ gr. x.; Subnitrat. bismuthi gr. v. Fiat pulvis: to be taken three times a day.

This I direct to be persevered in for some length of time, till all the symptoms of pain are removed. This may take up a period of two or three months, but in general you will find it much harder to dissuade your patient from taking, (such an effect has it in relieving him,) than you would have in persuading him to continue it. If the symptoms of this disease should again recur at any period subsequent to the discontinuance of the above combination, it will be very easy for you to have recourse to it again.—*Ranking's Abstract from Medical Times*, Jan., 1845.

28. *Ox-Gall in Constipation*.—Dr. R. H. ALLNAT, in a paper in the *Lancet*, (June 7th, 1845), relates several cases, illustrative of the good effects of inspissated ox-gall in the cure of habitual constipation. In a subsequent No. of the same Journal, (July 12th), he recommends that the ox-gall should be prepared in a water-bath, the gall being frequently stirred, to produce a perfectly homogeneous extract. The addition of a small quantity of magnesia will, he says, expedite the process. He gives it in doses of five grains made into pills, three times daily. He administers it also in some cases, in the form of enema.

29. *Neuralgic Periodicity*.—The following very remarkable case of neuralgic periodicity, is related by Dr. J. PIDDUCK, in the *Lancet* (July 26th, 1845).

The subject of the case was a female, 14 years of age, who had not yet menstruated. Six years ago she was thrown out of a swing, and her head struck against a brick. Violent headache, referred to the forehead, ensued, which lasted about a fortnight; the right hand then became clenched, and the headache ceased. The hand continued immovably closed for three weeks; it then opened of its own accord, and the headache returned. The hand remained open, and she had the free use of it for three weeks, during which time she suffered from headache. It then closed, with the same relief from headache which she at first experienced. Besides the freedom from headache, her general health was invariably better when the hand was closed, and the opening of the hand was invariably preceded by feelings of indisposition.

From the time of the accident to August last, a period of six years, the alternations of closing and opening of the hand and of headache have followed each other with perfect regularity, except sometimes during the summer, when the intervals have been somewhat protracted. Once, in summer, the hand remained open two months, with constant fore-headache.

When this patient came under Dr. P.'s care in August, 1844, the hand was closed, and she made no complaint of headache. A forcible attempt made to open the hand gave her great pain, extending up the arm. Dr. P. was struck with the excessively sour smell of the perspiration in the hand, resembling sour curds, just as putrefaction is commencing—a state of the cutaneous secretion which obtains in this form of nervous affections. She complained of tenderness along the cervical vertebrae. A grain of strychnia, divided into fifteen pills, one to be taken three times a day, was prescribed, and a succession of mustard-poultices along the spine. Dr. P. directed the hand to be well washed with soap and water, and ordered an antacid diet. Under this plan of treatment her general health underwent a manifest improvement, and when the hand opened at the ex-

piration of the last three weeks of its closure, she ceased to complain of her head, which she had never done on former occasions.

The strychnia, which had been continued fifteen days, was omitted when the hand opened, and the decoction of polygala senega, with sulphate of magnesia, was substituted, with the use of the vapour bath. These means were used for a month. Finding there was no return of closure of the hand nor of headache, that the tenderness of the cervical vertebræ was no longer felt, and that her health in every respect was good, the remedies were discontinued, and she has remained perfectly well.

30. *Treatment of Epilepsy by Digitalis.* By D. J. CORRIGAN, M. D.—Digitalis has been from time immemorial a quack remedy in the rural districts of Ireland, for epilepsy. Its effects, as administered by the fairy-women, (as those professing to cure the disease are called,) have been so violent, that the profession has shrunk from its administration, although success had in many instances followed its exhibition. The following is the formula which is generally used:—Fresh leaves of digitalis, four ounces; beat into a pulp, and pour over it a pint of boiling beer; infuse for eight hours, and strain with expression. Of this give every third day four ounces, with fifteen grains of dried root of polypodium. In another formula, the dose is to be repeated every third hour until vomiting is produced. In 1828, Sir P. Crampton informed me that he had superintended its exhibition in four cases, and that in three of these it had been successful, but that he did not venture beyond the first dose, its effects were so violent. It caused violent and continuous vomiting, like that of sea-sickness, which continued incessantly for twenty-four hours, with irregularity and feebleness of pulse that remained for several weeks after.

In the year 1831, Dr. Sharkey, of Cork, in a paper in the *Lancet*, drew the attention of the profession to its good effects in the disease, given according to a similar formula. The effects of a single dose (four ounces) were vomiting, soreness of epigastrium, cold extremities, cramps, and great depression and irregularity of pulse, continuing for several days. I exhibited the remedy myself in the same form, and I am not surprised that the profession should shrink from employing it. The first dose produced the most violent vomiting, followed by cold sweat, feeble and irregular pulse, and these symptoms again by intense gastritis, accompanied with great sinking of the vital powers, and double vision, which continued for several days, sufficient to deter me from ever again venturing on its administration in such a dose. There are some circumstances connected with the effects of this large dose that may be worth noticing here. It was given at ten o'clock, A. M.; at twelve o'clock the pulse had fallen thirty beats, viz.—from eighty-six to fifty-six, and there was slight headache with very slight nausea; it was not until eight o'clock, P. M., ten hours after the administration of the dose, that the violent symptoms set in. It then occurred to me that as it is a remedy possessing a cumulative property, I might succeed in saturating, as it were, the nervous system with its sedative property, without the risk of inducing those frightful effects which follow on the sudden exhibition of the large dose, and I believe I can now venture to say that this important point in practical medicine can be gained. After many trials of its preparations, I give the preference to the infus. digitalis of the Dublin Pharmacopœia; but I cannot too strongly insist on the necessity of the greatest attention being paid to see that the leaves are well prepared, and of the latest gathering; one of the cases narrated will exemplify the necessity of this caution. The mode of administering is to begin with $\frac{3}{4}$ i of the infusion every night at bedtime, increasing it after a week to $\frac{3}{4}$ iss, and after another week to $\frac{3}{4}$ ij, beyond which it is rarely necessary to go, and continuing it until sickness of stomach and dilated pupils are observed, when the dose is to be diminished by $\frac{3}{4}$ ss or $\frac{3}{4}$ i, until the maximum dose that can be borne without inconvenience is ascertained, at which the administration is to be continued for two or three months. Given in this way its exhibition is attended with no inconvenience, beyond an occasional attack of slight sickness of stomach in the morning, or headache, &c., when the medicine is to be omitted, and a day or two are to be allowed to pass over before resuming its use. With the exception of these symptoms, there is no perceptible

effect beyond slow action of the heart; and the patient during its use is able to follow his ordinary avocations.—*Dublin Hospital Gazette*, 15th May, 1845.

The Editor of the London and Edinburgh Monthly Journal of the Medical Sciences, in commenting on these observations, very judiciously says that the epileptic cases in which foxglove proves beneficial, are those in which there is much arterial excitement, but as this is *not generally present*, he fears the remedy will not be found *generally useful*.

31. Coincidence of Tubercle and Cancer.—It has been stated that tubercle and cancer mutually exclude each other. LIBERT, however, has not only met with a certain number of cases where the two diseases existed together, but has convinced himself that one in no way arrests the march of the other. In proof of this he communicates the following facts:—

1. A child, aged four years, had encephaloid tumours in the right kidney, and was also affected with cerebral and pulmonary tubercles.

2. A woman, sixty years of age, had scirrhouous tumours in the mammary glands, in the liver, and in the lungs. At the same time she had softened tubercles at the summit of the left lung.

3. The lungs of a woman, aged sixty-two years, contained tumours in various stages, and even several cavities in the superior lobe of the right lung. In the peritoneum existed encephaloid masses, together with numerous tubercles. The cancer had all the form of encephaloma. The tubercle had, throughout, the form of the yellow or caseous infiltration. The microscope enabled him readily to distinguish the corpuscles of tubercle from those of encephaloma, and to determine the evidence of their existence.—*Lancet*, Aug. 16, 1845, from *Müller's Archives*, 1844, Hist. 2.

32. Epidemic Cerebro-spinal Meningitis.*—During the last few years a terrible disease has prevailed in different towns in France, attacking principally the common soldiers of the garrisons of these towns, namely Versailles, Lyons, Avignon, Bayonne, Givet, Metz, Strasbourg, Nancy, and more recently in other localities. M. Faure Gillar† has described the disease as it prevailed at Versailles. M. Gassaud‡ has given a very similar account of its characters as it appeared at Bordeaux. M. Gasté§ has published his experience of the disease at Metz, in 1840; MM. Forget and Tourdes|| have observed it at Strasbourg; and M. Chauffard¶ at Avignon. Lastly, M. Rollet** describes its appearance at Nancy. The symptoms resemble very closely those of inflammation of the membranes of the brain and spinal cord in sporadic cases. According to M. Rollet, the disease occurs in two forms; in the one which he denominates "ménингite encéphalo-rachidienne," there are no signs of lesion of the nervous centres themselves; no affection of sensation or motion, though there are all the symptoms of inflammation of the membranes; at first, rigors, then malaise, tinnitus aurium, vertigo, violent pain in the head, extending along the vertebral column, agitation or restlessness, and slight delirium and moderate fever, or absence of fever. In the second form there is affection of the intellectual faculties, and also of the functions of motion and sensation, and more or less complete abolition of all the senses. This form of the disease is illustrated by the following case: "When the patient was admitted into the hospital, the face was dusky, (cyanosé,) the eyes fixed; the sclerotics injected; the pupils dilated and insensible to the action of light; there were furious delirium; wild cries; constant movements of the limbs; trismus; retraction of the head backwards, and marked

* Rapport sur une Mémoire de Cérébro-rachidienne et de l'encephalo-ménингite épidémique, par M. Rollet, Médecin en chef de l'Hôpital Militaire de Nancy. (M. Ferrus, rapporteur.) Bulletin de l'Acad. Roy. de Méd., Oct. 15, 1842, t. viii, p. 43.

† Mémoires de Médecine et de Chirurgie Militaires, 1840, t. xlviii. ‡ Ibid.

§ In a tract entitled Mélanges de Médecine.

|| Relation de l'Epidémie de Ménингite Encéphalo-rachidienne observée à Strasbourg, par M. Forget. Paris, 1842. Hist. de l'Epidémie de Ménингite Cérébro-spinale observée à Strasbourg en 1840-41, by M. Gabriel Tourdes, Paris, 8vo. 1842.

¶ Mémoire sur les cérébro-spinites qui ont régné in 1840 et 1841. Revue Médicale, Mai, 1842.

** Sixième Observation de M. Rollet.

diminution of sensibility; the skin was rather warmer than natural; the pulse 80, full, and hard; the tongue dry, and red at the tip; and the patient scarcely able to protrude it from the mouth. The next day there were profound stupor, nearly complete deafness; unintelligible muttering elicited by questions, and complete loss of sensibility. Death took place on the third day. The patient had been bled twice; forty-six leeches had been applied, and an *oxyerst* to the forehead. *Autopsy.* The cerebral arachnoid was very vascular; and upon the whole surface of the pia mater and the brain there was a layer of purulent plastic matter; and a considerable collection of this matter at the base of the brain, about the pons varolii and medulla oblongata. The cerebrum was slightly punctuated but not softened. The choroid plexus injected: the cerebellum softened; and the arbor vitæ of a blood-red colour. Beneath the spinal arachnoid there was the same kind of purulent matter as was observed beneath the cerebral arachnoid, and opposite the third dorsal vertebra, a considerable collection of pus, and also about eight grammes opposite the last dorsal vertebra. The substance of the spinal cord appeared healthy." The lesions here described are exactly the same as those mentioned by MM. Faure-Villar, Chauffard, and Forget. Morbid changes from inflammation have also been observed in the alimentary canal, but M. Rollet regards them as mere accidental coincidents, while M. Forget attaches great importance to them. Again, M. Villar noticed that lumbricoid worms were very frequently found in the intestinal canal in fatal cases, in 42 out of 56; and M. Gassaud cites cases in which they passed from the patient during life. But M. Rollet observed this complication only twice at Nancy. He remarks, that in those cases in which the substance of the brain is affected, there is an almost continual tendency to intermission, or at least remission, which alternates about every three hours with an exacerbation, but he regards this merely as characteristic of the encephalo-meningitis, not as an evidence of the disease being of the nature of remittent fever, which is the view taken by M. Gassaud.

With regard to *treatment*, M. Faure-Villar tried all rationale methods, but declares that none seemed superior to the rest. Out of 154 cases which he treated, 66 terminated fatally. M. Gassaud, who regarded the disease as a "fièvre céphalique subintrante," produced by marsh miasm, affirms that, of 162 soldiers attacked only two died when he had begun to treat them with medium doses of sulphate of quinine, at the same time that he employed purges, and at the commencement, venesection. M. Forget recommends the antiphlogistic plan of treatment at the commencement of the disease, and afterwards opium. Of 40 cases, however, he lost 24. M. Chauffard failed to cure the malady by antiphlogistic means, the most prompt, direct, and energetic; by revulsives, purgatives, calomel, and also by various tonics. Opium triumphed over it. But it was necessary to give it in large doses. The medicine most advantageously combined with opium was the sulphate of quinine. Before this plan was adopted, only 1 case was cured out of 30; afterwards the disease was less fatal than it ordinarily is in sporadic cases. Lastly, M. Rollet found that all the cases of simple cerebro-spinal meningitis, (that is to say, of inflammation of the membranes without lesion of the nervous centres themselves,) yielded to simple but energetic antiphlogistic treatment, or at most to this treatment aided by counter-irritants to the skin. One remedy only could control the more violent cases of encephalo-meningitis, when the brain and spinal cord also suffered, and this was cauterization. (In one case which is detailed, the actual cautery was applied at twelve distinct spots along the spine, besides counter-irritants.) M. Tourdes states that of 195 soldiers attacked, 122 died. He agrees with M. Chauffard that bleeding, tartar emetic, mercurials, refrigerants, and revulsives, were of no avail; but he cannot confirm all that Chauffard has said in favour of opium.

Dr. Gillkrest,* in a Report to Sir James M'Grigor, has described a similar epidemic which prevailed among the civil population of Gibraltar from January to May 1, 1844. Of 16,000 inhabitants 450 were attacked, of whom 190 had symptoms of more or less gravity, and 42 died. The majority of the cases occurred between two and fifteen years of age, and few only were attacked in a severe form above the age of thirty. With but few exceptions the disease prevailed

* *Medical Gazette*, July 5, 1844.

among the indigent classes. "There is no question," says Dr. G., "of the identity of the symptoms in our cases, with those described in the Versailles epidemic." No special atmospheric peculiarities could be assigned as its cause. Previous to its breaking out, an epidemical catarrh which had prevailed, declined; and before its setting in, as well as during its prevalence, "it was remarked that in indispositions of any kind, there was a tendency to headache more or less severe, the occiput being oftener than usual the seat of pain, and the muscles of the back of the neck being affected with aching." No opportunity was afforded of examining the head of a single child; in the adult cases the dura mater was always found free, but the arachnoid and pia mater exhibited the most unequivocal marks of inflammation, especially at the base of the brain, where pus as well as lymph, was frequently found. The ventricles in some instances contained large quantities of serum, lymph, and pus. Mercury and the ordinary antiphlogistic means constituted the treatment.

Several cases of *sporadic spinal meningitis* presenting many points of interest, have been recorded. One by Dr. Eitner, fatal in four days.* Professor Wagner† has detailed a remarkable case in which universal suppuration of the cerebro-spinal membranes existed without any corresponding symptoms, which were those of gastric derangement, till two days preceding death, when convulsions occurred. There was general softening of the brain and spinal cord.‡ Dr. Drazic has reported a case occurring under the care of Prof. Skoda, in which there was general paralysis of the voluntary muscles, without any loss of sensation or affection of the sensorium. The day before death there were profuse sweating, paralysis of the diaphragm, dyspnoea, with general mucous rhonchus (but no paralysis of the bladder), and subsequently trismus and convulsive movements of the muscles of the face. The brain was found to be natural. Between the membranes of the cord was a little grayish clear serum; the whole spinal cord was somewhat atrophied as well as the roots of the motor nerves, the upper ones especially being soft. The substance of the cord was generally pale and firm.§—*Bennett's Report in British and Foreign Med. Rev.*, July, 1845.

33. *Acute Dysentery with Detachment of the Mucous Membrane of the Large Intestine.*—M. CATTELOUP relates, in the *Recueil de Mémoires de Médecine, de Chirurgie et de Pharmacie Militaires*, tom. 57, two cases of this character which presented in the hospitals in Algeria. The first occurred in the person of a chasseur, aged 24, who had always enjoyed robust health, and was of sober habits. He was admitted into the hospital July 2, for a diarrhoea which had lasted several days, and was then accompanied with bloody stools. His affection, at first slight, soon became very grave, the bloody stools augmenting in number daily, and being accompanied with great pain and a quick full pulse. His treatment was antiphlogistic, and consisted in cupping the hypogastric region, bleeding from the arm and the application of leeches to the anus. Starch injections, cataplasms to the abdomen, and an abstinent diet were also employed, and three of the following pills, well known in French practice as Segond's pills, given at night. Ipecac. gr. j., calomel gr. $\frac{1}{2}$, opium gr. $\frac{1}{6}$. However, the symptoms progressed from worse to worse, and he died on the 13th. At the autopsy the small intestine was found to be healthy, but the large offered every lesion seen in dysentery. From the cæcum to the rectum it was covered with sanious or puriform discharge, upon the removal of which, engorgement, ramollissement, ulcers of variable size, and even gangrenous eschars were found. On opening the sigmoid flexure a cylindrical membrane, 32 centimetres in length, was observed. It so much resembled a portion of small intestine as at first to be mistaken for it. It was yet adherent at some points to the inner surface of the canal, and was believed to be a false membrane until its removal exhibited the muscular coat of the intestinal canal very distinctly. In the second case the patient was a strong, healthy, but dissipated man, æt. 30, who, after suffering from intermittent diarrhoea for some weeks, was exposed to great changes

* *Med. Zeitung.*, 21 Dec., 1843.

† *Oesterreich. Med. Wochens.*, Nov. 8, 1842.

‡ See also *Arch. Gén. de Méd.*, Fev., 1843. *Observation d'un Cas remarquable d'affection de la Moelle Epinière, etc.*, par M. Gérard, de Marseilles.

§ *Oesterreich. Méd. Wochens.*, Jan. 21, 1843.

of temperature and severe labour in a long march. The symptoms were soon converted into those of dysentery, and then became complicated with peritonitis. After death a perforation of the transverse colon and consequent abscess was found; the mucous membrane of the small intestines was quite healthy, but that of the large more or less diseased in its whole extent, presenting in different points ulcers and eschars. Near the perforation, a detachment of the mucous membrane, 35 centimetres in length, was observed, but which still retained some adhesions. An abscess was discovered in the substance of the anterior border of the liver.

The preparations in both these cases were submitted to a careful anatomical and microscopic examination by the professors of the Val-de-Grace, the result of which was, that no doubt whatever existed in their minds as to these being detached portions of the mucous membrane. The preparations are preserved, and are, the editor of the volume observes, of great importance, as being the only authentic examples of a detachment of a large portion of the mucous membrane from its mucous coat. In fact, the existence of such a lesion has been denied by most eminent pathologists, who have regarded such productions as always pseudo-membranous.—*Med. Chirurg. Rev.*, July, 1845.

34. *Cranio-Malacia, or softening of the Bones of the Head.*—About three years ago, Dr. WIDTMANN was called to a child, nine months old, who had died suddenly and most unexpectedly on its mother's lap. The attendants drew his attention to the state of the occiput: it was quite devoid of all hair, had a bluish aspect, and was so soft and unresisting to the pressure of the finger, that it yielded like a piece of thin pasteboard. Dr. W., attributing the death to *laryngeal asthma*, did not think much of the case, till about a twelvemonth afterwards, when he happened to meet with, in the writings of M. Elsaesser on *Atrophy of the Cranium*, an exact description of its leading features. According to this author's observations, the occipital bone, in this morbid state, will often be found on dissection to exhibit several solutions of its osseous continuity, the vacant spaces being then filled up with nothing but membrane. The periosteum is usually highly vascular, thick, and firmly adherent. Such a state of the cranium bones, M. Elsaesser regards as the commencement of rickets; this disease subsequently affecting other bones of the skeleton, if the patient survives. As a matter of course, the children affected with it are always poor, weak, ailing creatures, with big heads, pale bloodless complexions, and tumid bellies. These are the usual victims of that disease which, under the names of *thymic asthma*, *laryngismus stridulus*, *laryngeal asthma*, &c., has attracted so much notice of late years. M. Elsaesser prefers to call it *tetanus apnoeis* (*i. e.*, non respirabilis) *periodicus*, and attributes it to a transitory congestion of the brain, which has become the more readily excited in consequence of the attenuation of the cranial bones. The disease most frequently occurs in the second trimester period of life. A common symptom in such children is, that they are fretful and uneasy, whenever they are laid down; while they may generally be pacified by taking them up in the arms, and keeping the head well supported.

Dr. Widtmann relates no fewer than nine cases of this infantile asthma, in every one of which, he assures us, there was a very obvious and easily recognizable softening of the occipital bone. In one, which proved fatal, this bone is described as being externally of a deep blue colour, and as thin and yielding as a piece of parchment; the diploe was soft, and full of a sanguinolent fluid.—*Med. Chirurg. Rev.*, July, from *Medicin. Correspond. Bayerischer Aerzte*.

35. *On Oedema of the Glottis.*—By F. VALLEIX. The French Academy of Medicine proposed the following subject for their prize. *State the causes of oedema of the glottis, describe its progress, successive symptoms, and differential diagnosis. Discuss the advantages and inconveniences of tracheotomy in its treatment.*

Prior to the proposition of this question the attention of M. Valleix had been drawn to the subject during the composition of his much esteemed *Guide du Medecin Practicien*. Although oedema of the glottis was described by Bayle in 1808, its right of reception into our nosologies as a distinct affection has been frequently contested; and certainly of the forty recorded cases collected by M. Valleix for the present essay, there are several to which this designation can be ill-applied. In-

deed, as will shortly be seen, the description of our author embraces all inflammatory affections of the upper orifice of this tube capable by their resulting depositions of obstructing the admission of air. Practically this is of little consequence, since the same principles of treatment are applicable. He adds three cases from his own practice, and refers to two occurring in children, as reported by MM. Rillet and Barthez in their work reviewed in our present number. To proceed with our analysis.

Anatomical Lesions.—The author finds the cases in which the infiltration consisted of serum only to have been comparatively few in number, in three-fourths of those recorded pus existing also. The cases of simple infiltration generally arose in the progress of a general anasarca, as in that supervening upon scarlatina. The folds of the mucous membrane extending from the epiglottis to the arytenoid cartilages are especially the seat of the disease; and in three cases only have the *cordæ vocales* themselves been noted as presenting a certain degree of infiltration. The quantity of fluid effused is sometimes sufficient to produce enormous tumefaction, but few observers have supplied any exact details upon this point. The superior orifice of the larynx then presents two roundish pads, more or less projecting, and according to their size, offering a greater or less obstruction to the passage of air. They have a tendency to sink down into its aperture, when the larynx is open, and thus, as M. Lisfranc proved by experiments with a bellows, air obtains a far easier egress than ingress, the pads separating in the first case, and approaching each other when air was forced from above downwards. In three cases only has the *mucous membrane*, near the infiltration, been found in a healthy condition. In a third of the cases it was red, and in a sixth ulcerated. In one case, there was ramollissement, and in another gangrene. In sixteen cases more or less serious lesions of the *cartilages*, especially the cricoid, were found—the infiltration in fact being produced in consequence of the inflammatory action of the mucous membrane, induced by the carious, or other diseased state of the cartilages. The *epiglottis* was infiltrated in four cases, and in eight it was notably thickened. In one case it was ulcerated, and in another covered with a false membrane. In more than half the cases lesions of the *pharynx* were observed, such as coloration, ulcers, or abscess. It thus appears that *œdema* hardly if ever occurs without being preceded by organic lesions of the adjacent parts.

Causes.—The exciting causes are therefore the lesions just alluded to; but the predisposing ones have for the most part been imperfectly observed by authors. Age seems to exert some influence. Of 38 cases, four only occurred in children less than ten years old; and the greatest number were observed to occur between 18 and 30—the period in which phthisis, the most frequent cause of ulceration of larynx, so often the precursor of *œdema*, is most prevalent. So, too, this is especially the age for typhoid fever, during the convalescence of which *œdema glottidis* often occurs. The sex has been observed in 40 cases, of which 29 were males and 11 only females. This does not militate against the statement of phthisis being so frequently a predisposing cause; for, although that disease is most prevalent in women, M. Louis has observed that ulcerations of the air-passages are three times more frequent in men than in women. The effects of temperament, constitution, and seasons, have been too seldom observed to allow any conclusions concerning them to be drawn. As to the *prior state of health*, in 4 cases out of 40 only did the disease show itself as a suffocative angina, the patients being in good health at the time. In ten instances the affection appeared in the course or convalescence of typhoid, or other severe form of fever; and in 12 in the course or convalescence of various other diseases, as pneumonia, scarlatina, erysipelas, &c., &c. In nine cases it followed laryngeal phthisis, in one cancer, and in two syphilis of the larynx. In two cases the state of health was not indicated.

"When an inflammation is developed within, or only even near to, a part of the body where there is abundance of cellular tissue, we soon observe it become more or less engorged with serum or sero-purulent fluid, according to the violence of the inflammation. This is seen to be the case in the subcutaneous cellular tissue in inflammation of the skin; as also in the palpebral cellular tissue, when there is inflammation in the vicinity of the eye, or in the eye itself. This is also seen after a simple section of the prepuce, when the cellular structure often becomes infiltrated in a very notable manner. This effect may be observed in sub-

jects otherwise in good health, but it is much more frequently produced when they have been enfeebled by prior disease, and the blood has become impoverished; or there is a tendency to general œdema. We find here an explanation of what occurs in the larynx when a violent angina affects a healthy subject, and when even a slight angina, having its principal seat in the larynx or pharynx, attacks a subject affected with, or convalescent from, another disease. But to pursue the comparison: if an ulcer is developed with a certain degree of irritation in one of the portions of the body already mentioned, its edges are seen to swell, and the irritation spreading farther and farther, the neighbouring cellular tissue is infiltrated. This effect is remarked in chronic ulcers, when by some cause they become much irritated, as well as in acute ulcers. The same thing is seen passing around an abscess, whether a simple one, or one connected with caries of bone. In studying the facts I have now indicated, one may see, so to speak, demonstrated on the surface of the body, the various phenomena which terminate by producing the serous or sero-purulent infiltration of the larynx, and further, we see the reason of the predilection the œdema assumes for the aryteno-epiglottic folds of mucous membrane, the cellular tissue being here much less compact than elsewhere."

Symptoms.—Pain and tenderness in the region of the larynx or pharynx, with or without difficulty of deglutition, has been noticed in nearly all cases. The *cough* and *expectoration* have frequently not been even remarked upon by authors, and are only of a secondary importance. The change of *voice* is a very frequent, if not constant, sign. "It is at first raucous, then marked, then low, becoming in most cases extinguished, or almost so, towards the end of the disease. In one case alone it has been designated as croupal." Although *dyspnœa* is usually a principal symptom, it is in some cases not very marked. In 35 cases out of the 43, however, it has become at times suffocative. As observed by Bayle, the difference of the difficulty in inspiration and expiration is frequently very great, the former being far more noisy and laboured than the latter. In most cases, the inspection of the *fauces* seems to have been neglected; but in all the 13 in which they were examined, lesions of the pharynx, to a greater or less extent, were observed. It is however sometimes difficult to get the mouth sufficiently open. The examination with the finger, too, seems to have been seldom practised, although, in those cases in which it has been done so adroitly, the tumefaction of the glottis has been felt satisfactorily. The digestive organs are not usually much disturbed, but there are great fever, thirst, and restlessness. The countenance exhibits marked change, especially during the paroxysms.

Progress and termination.—The debut of the disease is hardly ever sudden, but once developed, it is often very rapid in its progress. When it results from a chronic lesion of the pharynx, its first announcement may be a suffocative paroxysm. When it is produced by simple inflammatory action the progress is rapid in proportion to its intensity, and it is then more uniform and less interrupted in its progress. In lesions of the larynx the paroxysms are more distant, and separated by intervals of calm. In some cases the paroxysms are truly dreadful to behold, of frequent occurrence, and long duration. Of the forty cases alluded to only nine were cured. Three only died during the existence of the paroxysm, and seven during a calm interval, in which all seemed going on well. In the other cases, death, although not actually occurring during the paroxysm, did so in the condition of asphyxia, which had become permanent. One perished during the operation of tracheotomy, one ten hours, an another 52 hours, after its performance. The *duration* of the affection is very variable as the circumstances attending it are so different; and death at periods varying from a few hours in one case, to 26 days in another, has been observed.

Diagnosis.—This, which would seem easy enough, has nevertheless in some cases been attended with difficulty. If, with the precursive symptoms already mentioned, and paroxysms of suffocative dyspnœa, we are able to feel an œdematosus swelling at the top of the larynx, by means of the finger passed rapidly into the mouth, this being widely opened, the diagnosis is almost certain; not quite, indeed, for some tumours, in the vicinity, have simulated these œdematosus swellings, as may collections of matter in the pharynx or œsophagus. Other affections of the larynx itself may render the diagnosis also obscure, as laryngitis terminating in suppuration, the seat of the formation of matter being the posterior walls of the

larynx, and generally just above the cricoid cartilage. In one such case only was the pus found in the aryteno-epiglottic folds—the usual seat of oedema. The suffocative paroxysms in this case are much less severe. In *false croup*, we observe that children are almost always the subjects, the symptoms nearly disappear in the intervals of the paroxysms, when the voice becomes almost natural, and no tumefaction is found on the exploration of the larynx. In *croup*, children are also the subjects, and false membranes are usually found in the pharynx. The only pathognomonic sign of oedema is, however, the presence of the oedematous tumours at the superior aperture of the larynx. Oedema glottidis is sometimes *latent*, and M. Louis reports two or three cases in which the symptoms did not manifest themselves until just prior to death—these patients being already brought into a dying state by the severity of other long-continued disease.

Prognosis.—This is of the gravest character, since whatever is done almost all die. The less the lesion which has given rise to the oedema has disorganized the tissues, the more chance there is of a cure being effected, if active means are employed.

"In pronouncing upon the degree of gravity from the symptoms observed, each case must furnish its own elements for decision. In a general manner only we can say that if the strength yet continues, the pulse is regular and strongish, if the features are not much changed, and the face not livid; if the efforts to enable the air to penetrate into the lungs are yet energetic, and if the wheezing or other noise is heard in the larynx with power enough to show that the air does, although with difficulty, penetrate into the lungs, we may have hopes that the disease will terminate favourably. If, on the other hand, the patient is prostrated; if his features are changed, his lips blue, his eyes haggard, his face cadaveric, as described by Bayle, if he has no longer the power of making the same respiratory efforts he did before, if the inspiratory *sifflement* has lost its energy, without respiration becoming deeper and easier, we must not allow an apparent and deceptive calm to deceive us; for the patient is devoted to a speedy death."

Treatment.—Of the whole number of cases collected, nine only were cured. General bleeding has been only put into force in seven cases, in some of which it has produced at least temporary benefit. Leeching has been tried in fifteen cases, and in the same number have blisters been applied to the neck. In two cases related by the author, blisters and emetics have been simultaneously employed, and a cure resulted in both. In the one, the oedema came on in the course of a syphilitic laryngitis. Emetics were given, a large blister applied to the neck and two others to the thighs. In the other case the oedema came on in the course of phthisis. Incision, or tearing of the oedematous tumours, and thus lessening their size, has been advocated by some; and the operation of tracheotomy by others. Of the 40 cases here reported, this has been practised but nine times, and in three of these life was saved. It must be remembered that the operation has been delayed until the last moment, when asphyxia was imminent, and yet out of the nine cases it has succeeded three times; while in the 31 remaining cases six cures only have resulted. Moreover, in only one case was the disease simple and primary, the others occurring in the course of an acute disease or of chronic laryngitis. To be successful the operation must not be delayed until the last moment, but should be put in force as soon as other methods have been found unsuccessful; but it should not be performed in those patients in whom the original disease is about terminating their career.—*Med. Chirurg. Rev.*, July, from *Mémoires de l'Academie Royale de Médecine*, tom. xi., 1845.

36. *Miliary or Sweating Fever.*—An epidemic of this disease, so celebrated in former times, but of late rather rare, has, for the space of a year, spread consternation through five provinces of France, la Dordogne, le Lot et Garonne, le Calvados, le Jura, and la Manche. Numerous accounts of the epidemic as it appeared in different parts of France, will be found in the French journals, but the fullest history has been given by M. Borchard, in his report to the Royal Society of Medicine of Bordeaux,* and by M. Parrot,† in a memoir read to the Royal Academy of

* *Gazette des Hôpitaux*, 4 Oct., 1842.

† *Bulletin de l'Académie Roy. de Méd.*, t. viii, 15 Nov., 1842, p. 105.

Paris, on which M. Martin Solon has reported.* M. Borchard first gives an account of the topography and statistics of La Dordogne, and points out the remarkable fact, that the localities in which marshes and stagnant waters exist, are those in which the disease raged with greatest violence. M. Rayer, in his description of the epidemic of l'Oise in 1821, and in his researches on similar epidemics, has made the same remark. The sweating sickness M. Borchard considers a general disease, depending on a cause which influences immediately and primarily the whole organism, the first shock being felt by the nervous and sanguineous systems, including the blood. All the epidemics of this disease known for a hundred years, have established the fact that the countries invaded have numerous marshes, ponds, rivulets, and forests; and all the historians of the disease have noted the frequent and sudden atmospheric changes, and the disturbances of the natural succession of the seasons. M. Borchard, therefore, concludes that the cause of the disease is an effluvium from stagnant waters, acting under the influence of certain barometric conditions, on localities which, by the vicinity of forests, are sheltered from wind. The epidemic appears to have commenced in La Dordogne in May, 1841, and extended south, destroying in Dordogne 797 of 10,805 persons attacked; whilst in the departments of Lot and Garonne only 614 died of 28,307 attacked. Two forms of the disease were generally recognized, a benign and a malignant; but cases which at the onset appeared slight, not unfrequently assumed, suddenly, the malignant form, and proved rapidly fatal. In whatever form it appeared, it was often developed without premonitory symptoms; in other cases severe headache, spontaneous lassitude, and (especially at Perigueux), nausea and vomiting, and pains in the loins announced its approach. Most frequently violent palpitation of the heart and of the cælic axis, accompanied by severe headaches, attended the onset of the disease; the skin was covered with a general profuse sweat of a very peculiar odour, whilst at the same time, in some instances, it gave to the hand a sensation of burning heat, a sure indication of the nature of the commencing disease. With these symptoms were associated a painful sense of sinking or anxiety at the precordial region, and in some cases violent delirium. About the second or third day, a distressing tingling of the whole surface of the skin occurred, which was followed on the fourth or sixth day by the characteristic eruption. This was, at first, red and apparently papular; but by the microscope could be shown to be vesicular, a character that was discernible the following day by the naked eye. The vesicles, transparent and of the size of millet seeds, appeared at the sides of the neck, on the chest, on the inner surface of the limbs, and sometimes over the whole body. The fluid contained in them had no corrosive property, and when inoculated into other persons produced only a little local irritation. The eruption was discrete, or confluent. On the fourth day it assumed a yellowish tint, and disappeared with more or less desquamation.

Through the entire course of the disease the gastro-intestinal system was free from disturbance, and in some severe cases the appetite was preserved. The complication with nausea and vomiting observed at Perigueux did not occur elsewhere. The tendency to assume a remittent or intermittent type was very generally remarked, though neither the sweating nor the eruption was affected by the exacerbations. The abnormal appearances revealed post-mortem, were various, but were more frequently seen in the brain and digestive organs than in the respiratory, and consisted chiefly of vascular injection and congestion. In some cases nothing was revealed by the examination. The blood obtained by venesection was generally of a bright-rose colour, the serum not separating readily, and the clot having usually the appearance of currant jelly, without any buffy coat, except in some few instances. The disorder and desolation caused by the mortality which attended the epidemic led to the trial of various modes of treatment. In some of the more malignant cases the patients sometimes died the third day, bathed in profuse perspiration; but before the appearance of the eruption. In such cases the expectant treatment was soon found insufficient. Antiphlogistic remedies were sometimes useful, in removing local congestion, but failed to overcome the severe symptoms. Purgatives were of no use till about the eighth day, when bilious symptoms showed themselves. In the milder cases, expectant

* *Bulletin de l'Académie Roy. de Méd., t. viii, Nov. 15, 1842, p. 1018.*

treatment with cooling diluent drinks answered best. But in all severe cases the testimony is almost unanimous in favour of the great importance and utility of quinine or bark. This, in the words of Parrot, "was the anchor of safety." It was given in moderate doses during the short remissions in the early stage of the disease. [The same bad consequences were observed from heaping the patients with clothes and encouraging the sweating, as were noticed by Sydenham and Caius, who also have made the same distinction between the mild and malignant forms of the disease.] An apparently independent epidemic occurred in the east of France in Haute Saone, in March, 1842, where it was attributed mainly to the artificial excessively hot temperature maintained by the inhabitants. In Saligny, D. of Jura, the mortality was great, apparently owing to the neglect of quinine in the early part of the epidemic.—*Bennet's Report in Brit. & For. Med. Rev.*, July, 1845.

37. Intra-thoracic solid Tumours.—The history of these morbid growths has hitherto attracted very little notice from any pathological writer. Dr. Gintrac, of Bourdeaux, twenty years ago, published a memoir on the diagnosis of various thoracic affections. Among these he mentions several instances of Steatomatous and Tuberculous tumours connected with the pleuræ; and now, his son, M. HENRI GINTRAC, following the footsteps of his father, has, in his recently published "*Essai sur les Tumeurs Solides Intra-thoraciques, 1845,*" collected together the histories of thirty-two cases of solid tumours—developed within the chest, but not appertaining to, or primarily connected with, the thoracic viscera. The structure of these growths or tumours was, as might be expected, very different in different cases: sometimes it was *encephaloid*, at other times *scirrhouss*, and in a third set of cases it was *tuberculous*. In several instances it has been said to be of a *steatomatous* nature. We shall briefly relate a few cases of this rare affection.

Case.—A man, 75 years of age, had been for a length of time asthmatic, and much distressed with palpitation of the heart upon any exertion. He became dropsical, and gradually sunk and died.

On dissection, a circular, somewhat flattened, osseous tumour was found at the lower and inner part of the right lung, the substance of which remained perfectly sound, but somewhat compressed. The left lung also appeared quite healthy; but it had been pushed upwards and backwards against the vertebrae, the lower part of the pleural cavity being entirely occupied with a large tumour that had become developed there. It proved to be a cyst with hard bony parietes, adhering by its upper surface to the substance of the lung, and by its lower to the diaphragm. The question naturally suggests itself, how are we to account for the development of such tumours in the cavity of the chest? If we attempted an answer, we might be inclined to say—perhaps by the osseous transformation of false membranes that had been formed during an attack of pleuritis at some former period. Several cases are recorded by M. Gintrac that were analogous to the one now briefly related; and in the history of one or two, it is not difficult to follow the connection of the phenomena which seemed to trace back the formation of the intra-thoracic tumour to an old pleuritic attack.

In other cases, the development of the morbid growth had clearly nothing to do with any previous inflammation in the part; for it was of an encephaloid or scirrhouss nature.

The situation of such tumours was sometimes between the pleura costalis and pleura pulmonalis; at other times, it was between the latter membrane and the substance of the lungs; and between the former and the ribs. Occasionally they occupied the place of the mediastina; and in a few rare cases they seemed to have originated in the osseous substance of the ribs themselves. Some of the cases of genuine intra-thoracic tumour have, at different times, been published as examples of degeneration or of hypertrophy of the thymus gland—an opinion which M. Gintrac considers to be quite erroneous.

It is rare that these tumours have been diagnosticated during the life of the patient. Occasionally indeed this has been the case, as in the following instance.

A man, who had for many years been subject to catarrhal complaints in the winter season, had an attack of pneumonia in 1830. In the end of May, 1839, he received a heavy blow on the lower and anterior part of the chest. On the following day, he found two distinct swellings in the part that had been struck.

Being examined at St. Andrew's hospital in Bourdeaux, it was found that one of these swellings rested outwardly upon the cartilages of the third, fourth, and fifth ribs, and inwardly upon the corresponding part of the fore surface of the sternum. It was irregular and knobby on the surface, resisting to the finger, without any sense of fluctuation, and firmly adherent to the subjacent parts. The second swelling, not more than four *centimetres* apart from each other, was larger, and of a hemispherical shape. It rested on the cartilages and anterior extremities of the eighth, ninth, tenth, and eleventh right ribs, being situated externally, or rather farther back from the median line than the other; it was equally unyielding and immovable.

The patient was suffering a good deal, at the time of his admission into the hospital, with dyspnœa: this became gradually worse and worse, and he died fifteen days afterwards.

From the external appearances, coupled with the existence of symptoms that indicated a compression of the lungs, M. Gintrac, senior, gave it as his opinion, that there was an intra-thoracic tumour in this case.

On *dissection*, a large tumour was found to occupy the entire front mediastinum, adhering firmly to the posterior surface of the sternum, and the cartilages of the ribs. The heart was pushed back, and the lungs compressed against the vertebrae. Similar morbid growths were found attached to the right clavicle, and to the inner surface of the 10th and 11th ribs on the right side.

Now, even in this case, it is very doubtful whether any correct diagnosis could have been formed, if it had not been that the presence of the extra-thoracic tumour naturally enough suggested the idea of the co-existence of similar growths within the chest.

In a somewhat analogous case, MM. Corvisart and Leroux mistook an immense fibrous tumour, compressing the left lung, for an effusion of fluid into the pleura. The case is altogether so interesting, and represents so well the phenomena which usually accompany the existence of tumours within the cavity of the chest, that we are induced to give the particulars of it.

A man about 33 years of age, accustomed to hard labour, was subject to alternations of profuse perspirations and sudden chills; he was attacked with cough, accompanied with mucous expectoration; to which were soon added hoarseness and dyspnœa, along with a sensation of prickling and pain, extending from the throat to the extremity of the sternum, and which was sometimes so acute as to occasion fainting. The dyspnœa increased daily. Some months after, hemoptysis supervened; the pains augmented; the beatings of the heart became more frequent and tumultuous. The lower extremities became œdematosus, and the sleep uneasy and agitated. When he entered the hospital, his face was pale and puffy, and his eyelids were œdematosus. A slight pain was felt towards the larynx and at the commencement of the trachea; the sputa were puriform, often tinged with blood; cough frequent; respiration short, deep, and sighing. The left side of the chest was more *bombé*, and rounded than usual; on percussion it did not give out any sound. The right side gave an obscure sound anteriorly, and a more clear one on the back and side. On applying the hand over the heart, no movement or pulsation of that organ could be felt. The patient preferred the sitting posture, inclining forward, but he could lie down either on the back or on each side, though more frequently and with greater ease upon the left one. The sleep was troubled with painful dreams. The pulse in both arms was small, frequent, and tolerably regular; generally, a little less strong on the left than on the right side. The skin was slightly œdematosus over the whole surface of the body: the feet were much engorged.

Corvisart, judging as much from the symptoms manifested since the attack of the disease, as from the signs furnished by the actual inspection of the patient, having especial regard to the total absence of sound in the left side of the chest, thought it was a case of effusion, filling all the left cavity of the thorax, and compressing the lungs so as to annihilate their functions. The breathing became worse, the expectoration altogether purulent, and the patient gradually sank and died.

Dissection.—In place of the effusion that had been predicted, there was a solid mass, of a reddish-white colour, and of an irregular and nodulated surface, which

filled the left side of the thorax, occupying also the usual place of the mediastinum, and extending upwards and in front on the right side. The left lung, of which the parenchyma was almost entirely disorganized, was reduced to a state that was almost lamellar: it contained besides an abscess in its substance. The right lung was considerably diminished in size; and the mediastinum, the pericardium, and the heart were pushed into the right cavity. The tumour was evidently situated between the debris of the upper lobe of the left lung, and the mediastinal pleura.

Pleural effusion is not the only morbid condition that may be mistaken for the presence of intra-thoracic tumours. M. Gintrac relates several cases where these growths have been accompanied with all the usual symptoms either of pulmonary or of cardiac disease. In a few instances, the most conspicuous symptoms were those indicative of hepatic derangement. With all our improved means of diagnosis, derived from auscultation and percussion, the case will almost always be one of perplexity and doubt. If there happen to be any outward tumours on or near to the thorax, and if the constitution of the patient be decidedly cachectic, and especially if the shape of the chest has become visibly altered since the first occurrence of the symptoms, we may possibly be led to form a correct opinion. The age of the patient may partly assist us; for most of the cases, hitherto observed, have occurred in middle-aged and old persons. In more than one instance, the aggravation, if not the invasion, of the symptoms was traceable to a blow or other injury of the chest. In almost all the cases collected together by our author, the heart was observed to be more or less displaced from its natural locality: this, therefore, is a phenomenon that deserves to be taken into account in our attempts to form a diagnosis. As a matter of course, the symptoms must vary alike in their character and intensity, according to the parts which are compressed or otherwise injured by the unnatural production within the thoracic cavity.—*Med. Chirurg. Rev.*, July, 1845.

38. *On a Dangerous Form of Jaundice.* By D. J. CORRIGAN, M. D.—This form of jaundice is to be met with, generally, among the poorer classes of society, but it occurs, with too great frequency, among persons of the middle rank of life, who have, for the most part, led sedentary lives. We find it occurring in merchants, whose lives have been made uneasy by having met reverses in trade, or by engaging in unsuccessful speculations. We find it occurring in females, mourning over the loss of a husband or a parent, while we as frequently meet with it in persons whose histories present nothing tangible to account for the disease. It sets in suddenly; sometimes we find the patient jaundiced all over in 30 hours, and this state of discoloration may continue for three days, three weeks, or as many months as weeks. In this form of jaundice, the pulse is regular, the tongue clean, the skin cool, and the appetite, in general, is tolerably fair; and we very often find, throughout the disease, the patient lively and cheerful, and able to perform the duties of life as well as ever. The only evidence of deranged health being, the jaundiced countenance, the white stools, and the urine loaded with bile. During this state of little or no derangement, from the natural standard of health, if the slightest tendency to head affection, such as delirium or coma, should set in, no effort of your art can save the patient. All is at an end; for the records of medicine do not present a single case of recovery from the situation which I have just now described. I know that, in works on practice of medicine, you find this disease either not noticed at all, or if it is, merely as one of no importance. The most minute *post-mortem* investigations discover nothing whatever faulty, either in the brain, liver, gall-bladder, stomach, or intestines. With regard to its pathology, we are completely in the dark, but though I cannot give you any information on this head, yet as a set-off to this want of pathological knowledge on my side, I think that I can give you what you will prefer to this, namely, an unerring cure for the affection in question, whenever it shall present itself to you in your future practice.

Having seen many cases of this disease unavailingly treated in town by blisters and leeches to the side, by the exhibition of purgatives, alkalies, and mercurials; knowing many such cases which were deemed incurable here, that afterwards were cured by country quacks by means of nauseous medicines; struck with this

fact, and reasoning from the effects on the stomach of the quack medicines which had been given for its cure, I determined to try the effect of emetics in it. The event was completely successful, and I can assure you that in an ample experience of four or five years since I first adopted this line of treatment, I have not had a single failure. In general, I am not wont to speak sanguinely of any remedies but those on which I can place implicit reliance, and the present occasion gives me an opportunity of speaking most favourably of the medicine which I have just been recommending to you. For the cure of this disease, it will be quite unnecessary for you to prescribe mercury, or any other medicine, save an emetic of 3ss. ipecacuanha every second night until the jaundice disappears. This frequently occurs after the action of the second emetic; even it will not be necessary for you to have recourse to purgatives, as the ipecacuanha in most instances relaxes the bowels; but, if you do order purgatives, let them be of such a sort as will not colour the feces—so that you may perceive if the bile is again being propelled into the intestines. Of the medicines not liable to this objection, the best you can select are decoctum aloes compositum, and magnesia usta. By carrying into operation in your future practice, the routine which I have just sketched out for you, I am confident you will be able to add to mine, your unqualified approbation of the benefit derivable from the use of emetics in this form of jaundice.—*Medical Times*, Jan. 25, 1845.

39. *Perforating Ulcer of the Stomach*.—Mr. CRISP* has related 5 cases of perforation of the stomach, and collected 46 others from different sources; and from a survey of the whole draws the following conclusions. Of 51 cases, 12 were males and 39 females, and the ages of the latter as follows:

Between 15 and 20	21
" 20 and 25	10
" 25 and 30	5
" 40	1
" 50	1
" 60	1

Most, if not all, of the females, were unmarried, and in 13 the menses were irregular. Perforation from simple ulcer, he states, rarely, if ever occurs before puberty in females, seldom after the cessation of the menses, and almost invariably in the unmarried. A chlorotic condition of system, he thinks, is the predisposing cause. In the majority of cases the opening was situated in the smaller curvature, and generally midway between the pyloric and cardiac orifices; in one instance only, it was close to the pylorus; in nine, two ulcers were present on opposite surfaces of the stomach, so that when collapsed the diseased parts were in contact. Seven cases are also detailed by Dr. A. Lefèvre,† who has succeeded, on the dead body, in rupturing the stomach by excessive inflation, and states that the openings thus made are of various forms, some *perfectly round*. He believes many of the instances of sudden perforation are caused by the ingestion of indigestible food, and the generation of gas; that the stomach is thus paralyzed, and unable either to pass its contents, or expel them by vomiting; that the acrid mass being retained softens the stomach, and thus further disposes to perforation. In a case detailed by Dr. Morici,‡ the patient, a male, who was recovering from remittent fever, and had no previous gastric symptoms, died suddenly on leaving the water-closet. The stomach was found torn along the middle of its anterior surface to the extent of three fingers' breadth. The only other morbid appearance being a little thickening of the mucous membrane along the edges of the aperture.—*British and Foreign Medical Review*, July, 1845.

40. *Constitutional Syphilis in the Father, a cause of repeated abortions, and subsequent infection of the fetus, born at the full period, the mother remaining wholly free from disease; with observations*. By Wm. ACTON, Esq.—The author remarks, that the Medico-Chirurgical Transactions, as well as Treatises on Venereal Disease, furnish numerous instances of syphilis in infants, dependent on previous contamination

* *Lancet*, Aug. 5, 1843.

‡ *Annali Universali di Medicina*, April, 1844.

† *Archives Générales de Méd.*, Sept.

of the mother alone, or of both parents; but surgeons and accoucheurs have hesitated in believing that the male can infect the embryo without infecting the female. Three cases are brought forward in order to elucidate the point in question.

M. H., nine weeks old, was brought to the author by its mother on account of an eruption, chiefly papular, over the whole body. The voice was hoarse, and there was slight discharge from the nose; the palms of the hand presented a scaly copper-coloured eruption. Emaciation was less than is usually observed in children labouring under syphilis, but that peculiar earthy hue of the skin generally was very evident. The mother states, she married four years ago, became soon after pregnant, and at the full time produced a dead child, the skin of which was dark-coloured, and peeled off on the slightest touch. During the following year she miscarried. On the occurrence of the third pregnancy, the child, the present patient, was born at the full period perfectly healthy. During the third week spots were observed on the genital organs, and they have been increasing up to the present time. No symptom either of primary or secondary disease could be discovered in the mother. The father, about four years ago, contracted chancres, was salivated, and secondary symptoms followed. He again took mercury, and, believing himself cured, married, and denies having had any primary symptoms since, but he has occasionally seen white spots on his mouth and tongue—has not remarked any spots on his body. There is nothing at present in his appearance to bespeak syphilis, nor can any recent marks of infection be discovered. The author directed an ointment, composed of unguent. hydrarg. nitrat. and spermaceti, to be applied to the affected skin, and a powder, containing two grains of hydrarg. c. cretā, to be given at night. Within a month the child was free from disease, and had regained its healthy appearance. The author gives an abridged account of two other cases of secondary syphilis in men, whose wives were free from all disease, but had miscarried. He remarks that these cases furnish three instances of males affected with constitutional syphilis who marry and yet fail to communicate any disease to their wives, thus far corroborating our experiments that secondary symptoms are not inoculable or capable of transmission from an infected adult to a healthy female. They moreover make it probable that a male thus infected may so far exercise a morbid influence on the embryo, the result of cohabitation between him and a healthy female, as to cause its premature expulsion, or disease it so much, that soon after birth secondary symptoms will appear. The first case further induces the belief, that though syphilis may produce miscarriage, a healthy child can be subsequently born, although no mercury be given to either parent. If it be true that the father can infect the fœtus without contaminating the mother, it justifies the surgeon in sparing her a course of mercury, and may induce him to treat the child with some mild mercurial without fear of its being re-infected by the milk of the mother; thus offering additional evidence that the mother does not participate in the disease which the child inherits from the father.

Dr. King said, that when a child was born with syphilis, Dr. Hamilton, of Edinburgh, used to recommend that both parents should be placed under the influence of mercury. He related some cases to show that a child might be born with syphilis, although the mother might be uncontaminated. He regarded the plan of treating the children so affected by placing a flannel belt round their body smeared with mercurial ointment and covered with oil silk, as recommended by Sir B. Brodie, as an excellent mode of treatment.—*Proceedings of Royal Med. Chirurg. Soc., Lond. Med. Gaz.*, May 23, 1845.

41. *Pathological Anatomy.*—The following very sensible remarks are extracted from the concluding paragraph of a Review of Schultz's General Pathology, in our highly esteemed cotemporary, the *London and Edinburgh Monthly Journal of Med. Sci.*, Aug., 1845.

"Our earnest desire is to impress on the minds of our younger readers, that PATHOLOGICAL ANATOMY IS NOT PATHOLOGY, and that it is but a means to an end. It is only by keeping this in view, that we can hope to avoid such a reproach as the following, by Professor Schultz:—'Physicians open a body, and find hypertrophy of the liver, or hardness of the spleen, and conclude that the patient died from

one or other of these affections! But they are blind to the fact, that hundreds pursue their daily avocations, with enlarged livers and hypertrophied spleens, and that women can walk about with ovaria enlarged to the size of a child, till at last, being found in the dead body, it is presumed, that death has ensued in consequence of these enlargements! Shall we never learn from such facts, that diseases do not originate from diseased masses and products, but that these same bodies are the effect of disease, and the token that it has been present? Shall we never learn that the patient died, not from these pathological growths, but from the process of disease which called them into existence? and further, that we are not to direct our attention to the mere residues of disease, and the products of death, but rather to the destructive, or death-process itself?" (Introduction, p. 25.)

42. *On the causes and prevention of Apoplexy and Paralysis.* By MARSHALL HALL, M. D.—There is no more delicate or more momentous question in the practice of medicine than that of the prevention of attacks of apoplexy, or of hemiplegia, or other paralytic affections. These arise from such different and even opposite causes, that that very course of medicine and regimen which is most conducive to safety in one case, has the very opposite tendency in another; and the diagnosis, on which our treatment depends, requires the utmost care and attention.

There is sometimes a state of plethora, or of too great fullness; sometimes the opposite condition of anaemia, or bloodlessness; in other cases there is neither plethora nor anaemia, but that morbid condition of the system termed cachexia, often denoted by boils, carbuncles, &c., with deranged secretions,—as the predisposing cause of attacks of paralysis.

Allied to this last condition, is that which obtains in dyspepsia and gout.

The imperfect performance of the function of the lung, of the liver, and especially of the kidneys, is, in another class of cases, the cause of these formidable diseases.

In some cases there is disease of the heart; in others, of the minute arteries or veins, or of the capillary vessels of the brain or its membranes.

The attention even of physicians has, until recently, been too much directed to fullness, as the general cause of the apoplectic or paralytic attack; and as to the public, they have to this moment only one idea,—that a fit, a seizure of any kind, is fullness; and the practitioner who, being summoned to such a case, shall brave this opinion, and, depending on his professional knowledge, his good sense, and his just discretion, shall discard that invariable refuge of the timid and ignorant, the lancet, will make himself responsible for the issue.

The real principle of prevention of the apoplectic or paralytic seizure, is that of inducing a state of *equilibrium*, in regard to plethora or inanition, and of *health*, in regard to the general tone, habit, and secretions.

Dr. Hall states that he has repeatedly been consulted by patients with a pallid and anaemic countenance, who have been kept in a state of constant alarm by the continual use of blood-letting, or application of leeches, whom an opposite course, especially a mild chalybeate, adopted and pursued with due caution and prudence, has rescued from this state of alarm, and of danger too—for there is danger even of apoplexy and paralysis, in a state of inanition,—in a moderate space of time.

In other cases, a state of dyspepsia, or of cachexia, has induced similar symptoms, which have been kept up by similar means. The cure depended on the restoration, by air and exercise, early hours, and a strict regimen, and mild cold bathing, and such remedies as quinine and sarsaparilla, of the general health.

Dr. Hall offers the following remarks on each of the conditions to which he has adverted.

1. *Plethora.* When there is plethora as the cause of the threatening of an attack of apoplexy or paralysis, the remedy, the safety of the patient, consists in—depletion.

How are we to be certain of the fact? There may be the appearance of the sanguineous temperament in the countenance, an athletic form, the general appearance of too rude health; and with all this, headache, vertigo, and other symptoms of head affection. But, is it certain that the symptoms, in such a case, depend upon fullness? If there be, in addition to the appearances and symptoms which I have enumerated, a disposition to doze, it is nearly so. But, in the absence

of such symptom, or even with such symptom, may not the real case be indigestion? Certainly. Then what is to be done? How shall we determine a question so momentous to our patient?

There is a symptom of great importance, when it can be clearly ascertained to exist. It is the occurrence of vertigo—1, in the stooping, or, 2, in the unusually erect position, especially when these are suddenly assumed. One patient turned giddy when he pulled on his boots. Another could not bear to look up to the ceiling of the room. In both these cases the diagnosis was pretty distinct. But in another case, no such event has been noticed. What is then to be done?

There is a resource in such a case, which, in spite of a criticism in a very respectable author, I will again venture to assert, is of immense value, and to which I shall have to revert in some subsequent chapters. There is no case in which the patient, if bled from a good orifice, in the erect posture, bears to lose so much blood before syncope takes place, as that of real congestion of the cerebral vessels; there is no case in which the full, not to say, the lavish, detraction of blood is so urgently necessary. On the other hand, the case of vertigo, and other symptoms of cerebral affection arising from dyspepsia, neither bears the loss of much blood, taken under similar circumstances of posture, &c., nor requires it.

In a doubtful case, I propose to adopt this mode of blood-letting; first, as a guard at once against the inefficient and the undue loss of blood, and, secondly, as a *DIAGNOSIS*, and as a prompter of our ulterior proceedings. I have adopted this measure so often, and with such satisfactory results, that I cannot recommend it too strongly to my medical brethren. In cases in which it has not been adopted, on the other hand, I have seen one class of patients become a prey to the apoplectic or paralytic attack for want of blood-letting, and another affected with headache and vertigo, yet drained of blood by repeated cupping or leeches.

No other measure affords such security to the patient, such satisfaction to the physician.

2. Anæmia.—But I come now to speak of cases in which a state of anæmia has already been induced. This is not a state of safety, even against the attack of apoplexy or paralysis. I constantly see patients who are in jeopardy, not from fullness, but from inanition, and who have been kept in a state of anæmia by blood-letting, general or topical, when an opposite treatment is required to restore the equilibrium of the system, or by defective digestion and nutrition.

A state of pallor; a disposition to vertigo, faintishness, palpitation; a state of nervous timidity; the recurrence of the symptoms when the stomach is empty, when the bowels are freely moved, or on suddenly looking upwards, or resuming the upright position after stooping, or on rising from the bed or sofa; such are the diagnostic signs of a state of inanition from a state of plethora.

The *history* of the case is, in every respect, a great aid in the diagnosis: if depletion has been used, it has been attended by this result—a temporary relief, with the subsequent aggravation of the symptoms; an opposite mode of treatment, very cautiously adopted and prudently pursued, involving quinine and iron, confers a more permanent benefit, but less marked and immediate.

To the important distinction between the immediate but transitory relief conferred by blood-letting, and the slow but persistent relief obtained from quinine and iron, &c., both being observed very closely, I would especially beg to draw the attention of the profession. In the former case, a state allied to syncope is substituted for the previous symptoms, which return on reaction. In the latter case, a gradual induction of health and restoration of the circulation effectually and permanently remove the symptoms. Without this explanation of the subject, the phenomena are sufficiently puzzling.

The state of anæmia itself is not free from danger, even of apoplexy or paralysis. In such circumstances, the actual effusion of blood into the substance of the cerebrum has occurred, with its attendant hemiplegia. Such a case is related by Denman: it occurred in the midst of exhaustion and anæmia from hemorrhage from uterine polypus; a clot of blood was found in one hemisphere of the cerebrum on a post-mortem examination. A similar case is detailed by Mr. Travers: it occurred under the actual use of the lancet, and during the flow of blood from the arm. A third case occurred to my friend Mr. Hammond, of Brixton: it took place after parturition; it assumed the form of hemiplegia; the patient gra-

dually recovered. We might therefore inadvertently bleed our patient into hemiplegia!

3. *Dyspepsia and Cachexia*.—There can be little doubt that, in dyspepsia, the blood itself becomes contaminated, and, as it were, *cachectic*. On this principle we account for the appearance of furunculus and paronychia; for the morbid condition of the tongue and interior of the mouth, the general cutaneous surface, the secretions, &c. I have so often observed symptoms threatening the apoplectic or hemiplegic attack, in conjunction with symptoms of dyspepsia and cachexia, that I have no doubt of the vast importance of a strict attention to this subject. This very day (Oct. 1, 1841), I have been consulted by a medical gentleman, from Birmingham, under these circumstances. One form of this affection is the following: vertigo occurs, with faintness, sickness, and a cold, clammy perspiration; sometimes there is actual sickness, sometimes much flatus. In these cases, the feet and other extreme parts are apt to be cold. The secretion of the liver is frequently defective, and the urine is apt to deposit the lithic acid salts. Nothing can be so injurious as blood-letting. In no case is the loss of blood repaired with such difficulty. The application of a few leeches frequently leaves a state of debility and pallor which is felt and seen for weeks. The treatment consists in the correction of the secretions, and in the infusion of tone and general health into the system. The compound decoction of aloes, the infusion of rhubarb, of gentian, of cinchona,—singly, or better, mixed together; sarsaparilla; the vinum ferri; the bicarbonate of potass; stomachics, tonics, and antacids, in a word, are the principal internal remedies. But with these, a mild nutritious diet, a system of gentle exercises, early hours, the tepid salt-water shower-bath, and a strict attention to the condition of the feet and general surface, by means of the flesh-brush, flannel, and a frequent change of shoes and stockings, should be conjoined.

4. *Gout*.—But I have frequently traced a connection between gout and its frequent attendant, the lithic acid diathesis, and the apoplectic and hemiplegic seizure. It is not merely plethora, or the opposite state of inanition, which leads to the apoplectic attack. The morbid state of the blood in dyspepsia and cachexia also disposes, as I have already said, to this affection. The same remark applies to the condition of the system and of the blood, especially in gout; and, as I shall have to observe immediately, the same disposition obtains in several morbid conditions of the liver and kidney.

A steady perseverance in such remedies as the decoctum aloes compositum, the bicarbonate of potass, and the vinum ferri, have, in some cases, effectually averted the threatened evil. The vinum colchici should be given in very minute doses, as five drops thrice a day, also steadily and perseveringly, to overcome the specific gouty diathesis.

The lithic acid diathesis is not the only urinary disorder which leads to apoplexy and hemiplegia. This attack, it is well known, occurs in the case of diabetes, and in that of albuminous urine.

Such are the predisposing causes of an attack of apoplexy or paralysis; the prevention must consist in removing them: and, according to circumstances, depletion, iron, sarsaparilla, colchicum, and antacids, with the appropriate system of diet, exercises, hours, &c., must be prescribed and steadily administered.—*Practical Observations and Suggestions in Medicine*.

43. *Apoplexy*.—The pathological conditions of the cerebral portion of the nervous system have always been held to be the most difficult to be comprehended of any to which the human frame is amenable. There is a want of correspondence between lesions and symptoms, a want of uniformity in the manifestations of diseased action, which renders the subject one of surprising intricacy. Not the least remarkable property connected with cerebral diseases, is the fact which is frequently manifested in the malady under consideration, that precisely the same train of symptoms may be produced by causes diametrically opposite; as for example, by too much blood circulating in the vessels of the brain, and too little,—by a state of plethora as well as by that of anemia. This being the case, it becomes a question of the most vital consequence in practice to determine, to which of these conditions a given apoplectic seizure is to be attributed. This question

is not so ready of solution as might at first sight be supposed. The tendency of medical men in general is too much to regard all apoplectic attacks as the result of fullness, whence bleeding is as much too frequently adopted. But that such a mode of viewing the phenomena of the disease as a general rule is as erroneous as the treatment arising out of it is dangerous or even fatal, will, we are convinced, become daily more universally admitted. The small amount of influence which the practice of blood-letting exercises in the cure of apoplexy is sought to be established in a late publication by Mr. Copeman,* upon the evidence of statistical data. Although we cannot admit that all the cases upon which the deductions of this author are based, are the best which might have been selected, they are still, we think, sufficiently trustworthy to be recorded as an approximation to the truth. It appears that of 155 cases of apoplexy in which the treatment is specified, 129 were bled, and only 26 were not; of the former number, 51 recovered, and 78 died: the cures, therefore, were as 1: $1\frac{1}{2}$; the deaths as 1: $1\frac{1}{2}$. Of the number not bled, 18 were cured, and 8 died, the proportion of cures being as 1: $1\frac{1}{2}$; of deaths, as 1: $3\frac{1}{2}$. Abstracting a certain number of these cases in which the bleeding consisted in the application of a few leeches only, we reduce the figures to 112; of these 38 recovered, and 74 died, i. e., there were two deaths where bleeding was practised to one cure. Although, as has before been said, these facts are to a certain degree imperfect, and like all deductions connected with so inexact a science as that of medicine, which are based upon the numerical method, are open to objection, they must, nevertheless, have the tendency as far as they go to place the abstraction of blood as a general remedy in apoplexy in an unfavourable light.

It is still, however, unquestionable, that in a certain number of cases of apoplexy, free blood-letting is imperatively called for. How then are these cases to be distinguished? The author above-mentioned places great confidence in the appearances of distention of the external vessels of the head; but this rule will in many cases be fallacious, in those patients in particular in whom constant exposure to the vicissitudes of temperature and season has produced a dilated condition of the capillary vessels of the face. In these persons a florid countenance is perfectly compatible with a state of system intolerant of the loss of blood, and would, therefore, if relied upon, lead to serious errors in practice.

A surer guide in a doubtful case will be found in some observations by Dr. M. Hall, [see preceding article.] We shall merely remark, that the plan of diagnostic blood-letting, as recommended by Dr. Hall, is even as yet scarcely appreciated, and that when judiciously carried out, it will frequently be the means of avoiding error, not only in the case in question, but in the many pseudo-inflammatory diseases which the readiest tact occasionally fails otherwise to diagnose.

In connection with the subject of apoplexy, we may mention a paper read a short time since before the Medico-Chirurgical Society, by Mr. Hewett, upon extravasations of blood within the cavity of the arachnoid. The author distributes these effusions into four principal groups: 1st. Those in which the blood is either liquid or coagulated, in the latter case being spread out in the form of a membranous layer; 2d. Those in which the extravasation presents itself in the shape of a false membrane; 3d. Those in which the blood is enveloped in a sac having every appearance of a newly-formed serous membrane; and 4th. Those in which the blood is fluid and encysted. Of these the third division is important in a physiological sense, as it tends to confirm the opinion that the blood is capable of undergoing organization by an inherent action, quite independent of that of surrounding tissues. In other respects the observations of Mr. Hewett are for the most part in accordance with those of MM. Becquerel, Legendre, Prus,† and Rilliet and Barthez,‡ the latter of whom, however, notices meningeal apoplexy only as it occurs in infants and young children. We may remark, *en passant*, that the rare occurrence of true sanguineous apoplexy in an infant only eleven days old, has recently been observed by Dr. Campbell.§—*Ranking's Report in Half-Yearly Abstract*, Vol. I.

* On Apoplexy. London, 8vo. 1845. † Acad. de Med. Séance, d'Avril 4, 1844.

‡ See Dr. West's Report on the Progress of Midwifery, &c. Brit. and For. Med. Rev., April, 1844.

§ Med. Gazette, May 23, 1845.

44. *On the Deposits of Carbon in the Substance of the Lungs.*—The following remarks are intended to illustrate the nature of that black matter that is met with, almost constantly, in the respiratory organs of old persons. All the cases that have been examined by me, says Dr. GUILLOT, physician of the Hospice de la Vieillesse at Paris, have occurred in men above 70 years of age; and in not a single instance had the patient followed any trade, the pursuit of which necessarily exposed him to the inhalation of carbonaceous particles. Most of my patients had been coachmen, gardeners, bakers, and so forth. Although, as might be expected at such an advanced period of life, one or more of the viscera were generally found on dissection to be diseased, the cause of death in the majority of cases was unquestionably due to the more or less rapid and complete interruption of the aërial or sanguineous circulation of the lungs, in consequence of the carbonaceous deposit in the pulmonary parenchyma. It has only been since the beginning of the present century that the attention of pathologists has been specially directed to the examination of those black deposits, that are so frequently met with in this structure.

Various opinions have been entertained by different pathologists as to their nature. Bichat* regarded them as minute bronchial glands; Breschet,† as formed by the exhalation of the blood into the fatty "cellules or utricles; Heusinger,‡ as deposits of a carbonaceous pigmentary substance, the result of the imperfect oxydation and decarbonization of the blood; Trousseau,§ as produced by cruoric globules. According to the latter gentleman and M. Andral,|| the deposition is the result of a secretion; it is regarded by Andral and Grisolle¶ as connected with the existence of chronic pneumonia; while Laennec**, Gregory†† and others have traced it to the inhalation of sooty and carbonaceous particles from a smoky atmosphere. Berard††† says that "the black matter of the lungs, which is not blanched either by chlorine or by nitric acid, owes its dark colour to carbon;" and more recently M. Bourgery §§ alludes to it as "a veritable deposit, apparently carbonaceous, and analogous to the deposit that lines the chimneys of our fire-places."

Dr. Guillot is of opinion that every one of these opinions is more or less faulty, and he undertakes to prove—

1. That the black matter, so often found in the lungs of old persons, is not formed by the blood or by cruoric particles, as Breschet and Trousseau have supposed;—neither is the result of any process of secretion, according to the opinion of Andral—nor has any analogy with the pigment of the skin or choroid coat—nor yet is owing to the inhalation of a smoky atmosphere.

2. That it is really and truly of a carbonaceous nature; but that the carbon is not derived from the process of chemical re-agents, but is deposited "en nature," during the continuance of human life, in the parenchyma of the respiratory organs.

3. That the presence of this carbon, by its gradual increase, may occasion—chiefly in the more advanced periods of life—certain morbid phenomena that are appreciable by the physician.

4. That the accumulation of this matter may be so extensive in the lungs as to cause death, by impeding the circulation and respiration; and that, in many cases of acute or chronic pulmonary disease in old people, the presence of these carbonaceous deposits adds considerably to the danger, and may account for the frequent fatality of the pneumonic attack.

Dr. Guillot adds that these carbonaceous deposits appear to have considerable influence on the various modifications which tubercles undergo in certain constitutions.

* *Traité d'Anatomie Descriptive*, t. iv. p. 22, Ed. 1839.

† *Considérations sur une Altération Organique appelée Dégénérescence noire, Mélanose, &c.*, 1821.

‡ *Recherches sur la Production Accidentelle de Pigment et de Carbon dans le Corps Humain, &c.* Eisenach, 1823.

§ *Archives Générales de Médecine*, t. xvii., 1828.

|| *Précis d'Anatomie Pathologique*, t. i. p. 459.

¶ *Traité Pratique de la Pneumonie aux différens âges*.

** *Traité de l'Auscultation*, t. ii. p. 312, et seq.

†† *Ed. Med. and Surg. Journal*, 1831.

‡‡ *Texture et Développement des Poumons*, 1836.

§§ *Notice sur les Titres de M. Bourgery*, 1845.

tutions: "the majority of patients," says he, "in whom the progress of phthisis has been modified or arrested, exhibit in their lungs on dissection, if they have reached an advanced period of life, a more or less extensive deposit of carbonaceous molecules."

Dr. G. has given the particulars of some chemical experiments, performed by M. Melsens, to ascertain the nature of melanotic matter obtained from the lungs. The result of them was clearly to show that it is of a truly carbonaceous nature.* On one occasion Dr. G. found, in the lungs of an old man, a compact mass of carbonaceous matter arranged in layers; it was black, very hard, having a shining metallic fracture, infusible, burning on a platinum plate without flame, and without giving out almost any smell. This matter, when burnt in a stream of oxygen gas, yielded nothing but water and carbonic acid.

The state of extreme division of this carbonaceous matter, as it is obtained by treating the lungs successively with acids, alkalies, water, alcohol and ether, enables us in a measure to form an idea of the hardness which in some cases it may acquire. It has been known to exhibit a brilliant aspect and the metallic lustre of the carbon, that is obtained from the decomposition of spirit of turpentine in a porcelain tube heated to redness.

We have already said that the deposit of melanotic matter in the lungs is almost peculiar to old age. Certain it is that it is rarely or never met with in infancy and youth; no appearance of it being usually discoverable until about the period of middle life. At first it looks (we require the microscope for this purpose) like a very fine black powder, sprinkled through the transparent substance of the pulmonary tissue. This powder is found to be constituted by the assemblage of excessively minute granules, separated more or less completely from each other; the intervals between them becoming less and less, as the amount of the deposit increases. The molecules seem to be quite impervious to the light; for, even under a high magnifying power, they look as intensely black as when seen with the naked eye.

The extent which these molecular deposits may occupy in the centre or on the surface of the lungs, is sometimes immense. In some cases, the pulmonary tissue is so deeply stained, that we can readily observe the accumulation of the black matter with, or even without, the aid of a lens, by placing a portion of the lung in pure water. Dr. G. is of opinion that the seat of the carbonaceous deposit is in the inter-vesicular or inter-canalicular spaces of this tissue, and not on the mucous surface of the extreme air-tubes. At this early stage, there is usually no other morbid alteration or abnormal condition of the pulmonary tissue discoverable. But when the quantity of the deposit is considerably increased, certain modifications, either of the air-tubes or of the minute blood-vessels, or of both, are usually observed to have taken place. These modifications are obviously the result of compression upon these parts, in consequence of the accumulation of foreign matter in their neighbourhood; the air-vesicles or tubules are obstructed, and the blood-vessels are rendered impervious. It is usually in the upper lobe of the lungs that the amount of carbonaceous deposits is most considerable: there is always a less amount in the lower, than in the upper and middle lobes. When there is a considerable deposit near the pleural surface of the lung, there is very generally the appearance of a dark-coloured cicatrix at this point—a feature that has often been mistaken for the trace left by a cicatrized vomica. It arises from the solidification of the pulmonary tissue, in consequence of the accumulation of carbonaceous matter underneath.

The melanotic deposit may be either diffused in small molecules over a wide extent of the lungs; or it may be accumulated in nuclei or masses, varying in size from that of a hemp-seed to that of a walnut or even of an orange. Dr. G. gives the following description of the appearances which he has sometimes met with on dissection, when the accumulation has been considerable.

"The rest of the pulmonary substance, deprived of its air-tubes and blood-vessels, forms then a sort of *gangue* which resists the edge of the knife, is sometimes very much indurated, inelastic, not unlike a piece of moistened pasteboard that

* *Recherches Chimiques sur la Matière des Mélanoses*; Compte Rendu des Séances de l'Academie des Sciences de Paris, t. xix. p. 1292.

has been stained dark, or to leather that has been boiled in water loaded with smoke-black. These very abnormal matters, in the midst of which the carbon is contained, do not lose their dark colour upon washing; they putrefy very slowly; and even in the act of decomposition, they continue to retain the black stuff with which they are penetrated. It thus appears that the charcoal is not to be separated by washing. Whatever be the force of the stream of water used, or the degree of putrid dissociation of the elements of the affected tissues, it requires a still more powerful action—one that is capable of entirely destroying their organization, without acting upon the carbon—to enable us to procure it by itself."

Occasionally we find that, in the centre of one of these masses of carbonaceous matter, there is a space occupied with black matter that is in a diffused state, and which may be washed out with a stream of water, so that there is left behind a cavity proportionate to the extent of the *ramollissement*. When this dark fluid is examined with the microscope, it is found to be loaded with carbonaceous particles, which exhibit the same chemical characters as the ordinary melanotic deposits do.

Dr. G. says that he has never seen a case wherein the melanotic matter was truly encysted, or continued in a distinct cyst or sac. This peculiar feature, and the circumstance too of the matter always having a molecular composition, may serve to distinguish this morbid formation from others of a similar appearance, occasionally found in the brain, liver, kidneys, &c. From repeated most careful examinations with the microscope, he is quite satisfied that the carbonaceous deposits have nothing to do, nor are in any degree connected, with the extravasation of blood in any form.—*Med. Chirurg. Rev.*, July, from *Archives Générales*.

45. *Operation of Paracentesis Thoracis.* By HAMILTON ROE, M. D.—The operation of tapping the chest in chronic pleurisy and hydrothorax has long been a fruitful theme of discussion. The balance of opinion has in general been unfavourable to it as regards the cure of the diseases, for which it is recommended; but the support of such names as Larrey, Frank, Bell, Williams, Copland, &c., may fairly be adduced as a reason for a dispassionate inquiry into its real merits. Such an inquiry we find in a paper read before the Medico-Chirurgical Society by Dr. Hamilton Roe, which, as it is replete with practical information, we shall endeavour to condense for the benefit of such of our readers as have not access to the original.

The author opens his communication by an examination of the principal objections which have from time to time been urged against the operation. One of these is, that it frequently induces dangerous syncope; that it is of little use in peritoneal effusions, and therefore by analogy cannot be of more service in effusions into the pleura; and that as it does not cure the inflammation which gives rise to the effusion, no object is attained by merely removing the fluid. In answer to this, the author replies that in thirty-nine cases, which he gives in a tabular form, syncope did not occur once; that the observations respecting peritoneal dropsey is false, and that the operation is not recommended until inflammatory symptoms have ceased.

Another objection, and one which has the support of many great names, is, that the admission of air into the cavity of the chest gives rise to dangerous and frequently fatal symptoms. Dr. Roe decides this objection also to be without weight, for every case which has fallen under his observation, "a considerable quantity of air entered into the pleura during the operation, and in some of them so freely, as to excite all the physical signs of pneumothorax, but in none of them did it produce any permanently evil effect; in one instance only did it cause even temporary inconvenience."

The last objection noticed by the author, is, that the operation is unnecessary, as all cases really curable are curable without paracentesis. This was the opinion of the late Dr. Hope, founded upon the analysis of thirty-five cases. In answer to this the author inquires what is meant by cure. If by it is meant not only the removal of the fluid but the return of the lung to its normal state, he denies the power of internal medicines. The objection is also untenable for the reason that the operation is not proposed until the failure of medicines, the principal of which is mercury, points out the necessity for some ulterior proceeding. To spend much

time in the endeavour to promote absorption when the process appears to be tardy in making its appearance, is injurious to the patient, as it allows the lungs and pleuræ to undergo those irremediable changes which render their restoration impossible. For these reasons Dr. Roe observes that less harm is inflicted by tapping than by the sole reliance upon internal medicines.

The objections, therefore, to paracentesis are reduced to this; that it inflicts a wound; whilst in favour of it, it may be said that in empyema it at once removes a noxious fluid, and by its early adoption prevents the irremediable changes above noticed.

Having disposed of the objections which are ordinarily brought forward by the opponents of paracentesis, the author in the next place proceeds to point out the forms of disease to which it is applicable, and the indications for its performance.

The term empyema is limited by him to those cases in which the contents of the pleural sac are purulent; hydrothorax being applied to serous effusion whether inflammatory or consecutive to disease of other organs. In empyema the operation is indicated in those cases which do not yield quickly to ordinary treatment, and its advantage is shown by the proceedings which nature sometimes adopts in similar cases. When the fluid is once clearly ascertained to be purulent, the operation should be performed without loss of time.

In serous effusions, in which the life of the patient is threatened by the rapid accumulation of fluid, paracentesis is admitted to be the only remedy. It will also be frequently necessary in serous effusions occurring in scrofulous habits, in which the necessary treatment has either failed or been neglected. In mechanical hydrothorax the operation is only palliative, as the cause of the effusion being organic, it is impossible to prevent its re-accumulation.

In order that the operation should have the greatest possible chances of success, it is indispensably necessary that it should be employed before either the constitutional powers of the patient are too much reduced, or the thoracic viscera have undergone irremediable organic changes, for in the former case the absorbents cease to perform their functions, and therefore cannot prevent the re-accumulation of the fluid: and in the latter a cure is impossible, for the lung being condensed by the pressure of the fluid, and bound down by adhesions, cannot re-expand. In respect of the necessity for performing the operation early in order to ensure success, paracentesis resembles many other operations, such as laryngotomy, the operation for strangulated hernia, &c.

It would be very desirable to fix, if possible, the precise period beyond which the operation ought not to be delayed. There can be no doubt that it should be before the changes in the lung have taken place, but the exact point of time is not easily determined. Dr. Roe considers that the operation should be performed as soon as the acute symptoms of pleurisy have subsided, which, as a general rule, he thinks, happens within three weeks from the commencement. The exploring needle will be found a most valuable instrument in determining the nature of the effusion previous to the tapping.

The Operation. Some difference of opinion exists as to the manner in which the operation should be performed, and the quantity of fluid which should be evacuated at one time. Formerly an incision was made into one of the intercostal spaces, the fluid was evacuated at once, and the wound was left open. More recently the opening into the pleura has been made with a trochar, the wound being kept open or closed immediately. The two former modes are objectionable, as it allows the admission of air, which, though, as before stated, is not immediately injurious, may become so by constant ingress. In the cases alluded to in the table, the opening was made with the trochar, and closed immediately after the evacuation of the whole of the fluid, and if it re-accumulated, the operation was repeated. This Dr. Roe looks upon as the best mode of proceeding.

In the twenty-four cases witnessed by Dr. Roe the opening was made as recommended by Laennec, in the space between the fifth and sixth ribs, a little posterior to the digitation of the serratus magnus. The skin being previously drawn downwards so as to make the opening valvular, a deep incision was made, and a sharp trochar and canula were afterwards passed inwards and upwards with sufficient force to puncture the pleura. Any inflammatory symptoms which

might arise were combated by extensive dry cupping, and the internal administration of small doses of mercury.

Diagnosis of pleuritic effusion. Cases are on record in which the sound side has been tapped instead of the diseased one, to the certain destruction of the patient, by the production of pneumothorax on the side opposite to the one containing the effusion. Such a mistake in the present day would be unpardonable, as effusion in any quantity ought to be readily recognized even by the inexperienced auscultator. When, however, the fluid exists in small quantity, it may be overlooked from the following causes:—the fluid as a matter of course gravitates to the most depending portion of the chest, and therefore on the left side, may be obscured by resonance given out by a distended stomach, and on the right may be mistaken for the liver, if the dull sound on percussion alone be taken as a guide. The former difficulty may be cleared up by percussion lightly over the suspected effusion, by which means the resonance of the stomach will not be elicited. The mistake on the right side can only be rectified by the possession of an accurate knowledge of the exact height to which the liver rises.

Dr. Roe mentions, as a valuable diagnostic sign in addition to dullness on percussion, a marked degree of fullness, or even protrusion, of the infra-clavicular space in the affected side. He does not consider bulging of the intercostal spaces so conclusive and invariable a sign of copious effusion as has been generally imagined, especially in serous effusion, although it is more constant when the contents of the chest are purulent, and is therefore more indicative of the quality than the quantity of fluid. The absence of the vibratory thrill, and the posture assumed by the patient, are both estimated by the author at their proper value.

The author, in concluding his valuable paper, inserts a table of twenty-four cases which occurred immediately under his own inspection, and which certainly place the operation in a very favourable light. Of these eighteen recovered and six died; but this, as observed by the author, was a greater mortality than can be fairly laid to the charge of the operation, as one was from phthisis, another from pneumothorax, and a third from consecutive hydrothorax, in which of course the operation could only be regarded as palliative. Upon these considerations the author believes himself justified in stating "that the operation is not more dangerous than any other which is performed upon the human body, and that the evil consequences supposed to attend it are imaginary rather than real, inasmuch as it was not only not fatal in one out of twenty-four cases, but did not produce even temporary inconvenience in any."

[A case is related by Dr. Thompson in the same volume, in which the operation of paracentesis was performed four times, and eventually with perfect success. The patient was a boy six years of age. Dr. Thompson advises the valvular opening and the partial removal of the contents, especially when the discharge is purulent. He justly condemns the practice of leaving in the canula, which, as in a case related by Dr. Stroud, (*Med. Quart. Review*,) is capable of converting a serous into a purulent effusion.]—Ranking's *Abstract*, vol. i. from *Medico-Chirurg. Transactions*, vol. xxvii.

SURGICAL PATHOLOGY AND THERAPEUTICS AND OPERATIVE SURGERY.

46. *Fungus of the Testicle.*—In our last No., p. 202, we noticed a new treatment of fungus of the testicle described by Mr. Syme. Several objections to it, and among others, the probability that the surface of the fungus would not unite with the superinduced integuments, were shown to be groundless by the result of Mr. Syme's cases; but the weightiest one, the doubt whether the gland would return to a healthy condition, and regain its functions, still remained. This objection, and it is a very weighty one, can only be removed by the operation being performed on a patient who had been previously deprived of one testicle. Precisely such a case is related by Dr. JAMES DUNCAN in the *Northern Journal of Medicine*, (June, 1845,) and the result is satisfactory.

The subject of this case was a man, 28 years of age, admitted in the Royal

Infirmary, March 30th, with fungus of the left testicle. The protruded portion is about the size of a large walnut, and appears to include the greater part of, if not the entire, testis. It is softish in consistence, and otherwise presents all the characters so well described by Mr. Lawrence.

The disease commenced about four months ago. The testicle became painful and swollen. The swelling increased until it had attained the size of his fist. The scrotal integuments then became adherent, and in about two months gave way, discharging a small quantity of purulent matter. The fungoid protrusion for which he was admitted, then formed, and from that time the pain greatly diminished. Small superficial sloughs have occasionally been detached from the fungus.

The right testicle has been diseased at a former period, and no trace of it now remains. The patient has been in bad health for several years, and has been several times salivated for the treatment of syphilis.

An elliptical incision was made around the fungus, and extended upwards and downwards; the integuments were raised and brought over the growth and retained by several stitches. This was accomplished with great facility.

Some degree of inflammatory œdema followed the operation, but this quickly subsided, after puncturing the integuments with the lancet, and fomentations. On the third day the sutures were cut, and support given by means of several stripes of adhesive plaster. Partial union only, by the first intention, took place; but there was, notwithstanding, no disposition in the fungus again to protrude.

The patient left the house on the 10th of May, the wound having been for some time completely cicatrized.

This man assured Dr. Duncan that his sexual desires were unimpaired, and as strong as they had been two years previous to the existence of disease in either testicle; and Dr. D. is inclined to believe from a communication he has since had from the patient that these powers have been tested.

47. *Cure of Panaris by Mercurial Ointment.* By M. MARTIN.—A curious epidemic of whitlow affected many soldiers of a French infantry regiment while stationed in the Basque Provinces on the Spanish Frontier, in 1835. The whole number affected amounted to 101 in 16 months, and 10 cases are related as examples. The inhabitants of these regions are remarkably robust, possess great corporeal agility, breathe a pure air, and partake of abundant food, containing a too large proportion of spice. It results that they enjoy a great exemption from internal maladies, and when these do occur, they are soon cured. But, at the same time, they are very liable to peripheral affections, such as erysipelas, dartres, phlegmons, furuncles, anthrax, hemorrhoids, &c. After the regiment had arrived in this locality, and the soldiers had enjoyed a mode of life so different to that they had led in barracks, their health became better than it had been for eight years before. But this improved regimen, although it seemed to secure them against severe ailments, and impart to them much additional bodily activity, as the warm weather approached rendered them liable to a great variety of cutaneous diseases, especially the inflammatory affection of the hands, termed panaris. The indulgence in spirituous liquors seemed to have had much to do with this; for the officers, who followed a temperate regimen, never were the subjects of the affection, and the soldiers, who did not indulge in excess, were also exempt, although exposed to the other causes, as immoderate use of spices, too violent exercise, and high temperature. The Spanish Basques, exposed to the same hygienic influences, but of much more sober habits than the French Basques, suffered much less frequently. External irritation, such as friction, contusions, &c., did not seem to have more than its ordinary influence in inducing this affection.

The disease was a serious one, being a most intense local phlegmasia, with corresponding constitutional derangement and local consequences. Suppuration was the mildest termination; for, as the tendinous sheaths sometimes became implicated, caries of the phalanges and loss of a finger, were not an uncommon occurrence.

The treatment consisted in general and local bleeding, revulsives, narcotics, emollients, incisions, &c.; but, however carefully any of these means was employed, no arrest of the progress of the affection took place. The reporter having met in a journal with an account of the utility of the *mercurial ointment* in similar

cases, gave it a trial with the happiest results; for, rebellious as the disease had before shown itself, it now became quite manageable. The part affected was rubbed with the ointment every alternate five minutes for two hours night and morning, a cataplasma being afterwards applied. Relief was so prompt and complete, that it was naturally believed the character of the disease had changed; but some cases happening to occur which were treated by the ordinary means displayed all the former virulence. Prior to the mercurial treatment resolution never occurred, and many most unfortunate terminations were observed: but, subsequently, the very reverse took place. After the troops left the locality and returned to their old quarters the disease never reappeared.—*Med. Chirurg. Rev.*, July, 1845, from *Recueil de Mémoires de Med., de Chirurg., et de Pharm., Militaires*, tom. 57.

48. *Fracture of the Leg, the patient walking and riding during twelve days after.*—An adjutant of dragoons, in jumping from a height, came flat upon his feet, and felt a severe pain in the middle of the leg, which obliged him to remain quiet for a few minutes. He soon, however, walked some miles, and for several days after continued to perform the duties of his post, which from the 9th to the 13th of September, were of a peculiarly fatiguing character. During this period there were some pain and swelling, but on the last-named day, while descending a declivity, a bone was heard to snap, and he would have fallen to the ground but for the arm of a friend. Both bones were found fractured towards the lower part of the middle third, the tibia being broken very obliquely. The case was then treated in the usual method, and the patient recovered the perfect use of the limb.—*Ibid.*

49. *Ruptures of Ovarian Cysts.*—Dr. CAMUS, in an interesting memoir read before the Medical Society of Paris, and published in the *Revue Médicale*, (Nov., 1844,) gives the details of a case of encysted dropsy of the right ovary in which the cyst three times spontaneously ruptured, its contents being effused into the peritoneal cavity, and on all three occasions the effused fluid was absorbed.

The subject of this case, a woman about 45 years of age, had laboured under encysted dropsy of right ovary for two years and a half. Purgatives, diuretics, ioduret of potassium, and compression, had alike failed in procuring any benefit. The patient was on the whole, however, in a tolerably comfortable state, till the 17th of January, 1844, when the tumour became the seat of severe pain, accompanied with extreme lassitude, shivering, and slight fever.—(A bleeding prescribed.)

On the 19th, the patient was suddenly seized with severe pain in the abdomen, prolonged shivering, nausea, vomiting, and great restlessness; pulse 126, small and hard, colic, face anxious, as in peritonitis.

On examining the abdomen, M. Camus discovered to his surprise that *its shape was completely altered*: instead of projecting it was flattened at the centre. But the abdomen had gained in size what it had lost in prominence. Percussion yielded a clear sound in the median line in the neighbourhood of the umbilicus, where formerly a dull sound had been heard. At the sides, on the other hand, the clear sound was replaced by a dull one. The undulation of fluid from one side to the other had never been before so perceptible. These remarkable changes were evidently due to rupture of the cyst, and the consequent effusion of the fluid which it contained, into the peritoneal cavity. The encysted dropsy had become converted into a true ascites. Notwithstanding the fears to which this accident gave rise, the peritonitis terminated happily in the course of two or three days.

On the 22d and 23d, the urine, hitherto scanty, became clear and limpid, and in such quantity as to fill the vessel five times in the twenty-four hours. During this time, the abdomen also lost from two to three inches daily in circumference, and became more and more pliant.

On the 1st February, twelve days after the rupture, the urine still continuing to be passed in abundance, the existence of fluid in the peritoneal cavity could no longer be discovered. The abdomen was reduced to size to which the patient had been long a stranger; and all symptoms of inflammation had disappeared.

Notwithstanding the employment of regular pressure and diuretics, the fluid soon again accumulated, and the abdomen acquired a size even greater than formerly. On the 17th July, the patient was seized with sudden pain, and an extra-

ordinary movement in the abdomen, which phenomena being almost immediately followed by sinking of the median line and enlargement of the sides, indicated that effusion of fluid had *a second time taken place into the peritoneum*. The same series of phenomena occurred as formerly, but they were of less severity. The quantity of urine was also less. The fluid, however, was again entirely absorbed, although somewhat more slowly.

At the end of four months and a half the cyst had again filled; a third rupture took place; there were the same symptoms, but with diminished severity. The urinary crisis was also less abundant, although the absorption was accomplished in ten days.

M. Camus was naturally led by the preceding case to seek for analogous ones among authors, and from a comparison of these, he has deduced some highly interesting conclusions. As regards the termination,—the patients in whom rupture of an ovarian cyst took place into the peritoneum, may be classed under four categories.

1. Into those in whom death occurred immediately, or within a few days of the first rupture. These cases are rather numerous; but, in most, dissection disclosed that the cyst, previous to rupture, had contained a purulent fluid more or less altered, and not the serum usually met with. This circumstance is sufficient to account for the fatal termination of the disease.

2. Into others, who, after one or more ruptures, have remained affected with ascites. Morgagni relates several cases of this kind, some observed by himself, and others by Basius, Gutermann, and Schecher. It is not, however, demonstrated that in these cases the ascites did not originate at the same time with the ovarian cyst, and previous to the rupture of the latter.

3. It is to be observed that most patients who have survived one or two ruptures were cured only temporarily, and at last sank under the progressive effects of the encysted dropsy. Mauriceau, (*Obs. 49.*) Morgagni, Boyer, (*Maladies Chirur.*) and Bluff, (*Thesis*, by Cazeaux, 1844,) quote examples terminating in this way, which are interesting, as they exhibit a large number of ruptures and peritoneal effusion, followed by absorption of the liquid, without any serious alteration of the general health.

4. There was one patient, who, after several ruptures, was definitely cured of the encysted dropsy. This *unique* case is given by M. Bonfils, and was the subject of a report to the Academy of Medicine, by M. A. Bérard.

M. Camus then puts the following question:—Can art do anything towards rendering the rupture innocuous, and thereby produce a cure of these ovarian cysts? As there is no hope of obtaining a cure, and consequently no end to be served by inducing rupture, provided the cyst contains pus instead of serum, this point ought first to be ascertained by a previous puncture. With this important exception, M. Camus repeats the advice given by M. Bonfils, who recommends, after puncture of the cyst, and previous to withdrawing the canula, to move the instrument somewhat briskly in different directions so as to contuse and even tear the wound made in the walls of the cyst, and thereby prevent the adhesion of its edges, and so to allow a continual escape of fluid from the interior of the cyst into the peritoneal cavity, where it will be absorbed. But can the successful results said to be obtained by M. Bonfils by his method, be thus explained? Ought we not rather to attribute them, with M. Bérard, to the effects of adhesive inflammation—induced by the movements of the instrument—producing obliteration of the cavity? M. Camus admits that the explanation of M. Bérard is the more logical. But he, at the same time, remarks that in the case of rupture, the fluid is not evacuated as after puncture, but remains in the abdomen in contact with the opening into the cyst, and that thus, its pressure must be greatly adverse to the work of adhesion, on which the radical cure depends.

In any case, however, the innocuousness of these ruptures, and the possibility of the re-absorption of the effused fluid, are two facts worthy of the fullest consideration. They ought henceforth to be taken into account in the history of these affections, and would authorize us more than ever to have recourse to a mode of cure more certain and less dangerous than any we yet possess for this formidable species of dropsy, we mean subcutaneous incision of ovarian cysts, or accord-

ing to circumstances the simple puncture, operations already several times proposed by the author of this method.—*Lond. & Edin. Monthly Journal of Med. Sci.*, July, 1845.

50. *Complete Dislocation of the Tibia forwards, produced by simple extension.* By Dr. FELIX JACQUOT, of St. Die.—A serjeant, 21 years of age, of robust habit, entered the Military Hospital of Instruction at Metz, July 23d, 1844. Half an hour afterwards he met with the following accident:—Making a long jump of nearly four yards, upon a flat surface, he fell, contrary to the gymnastic laws, upon the left foot, the leg extended and directed backwards, whilst the right leg, being in advance, did not reach the ground. He experienced violent pain, and fell forwards upon his belly. A dislocation of the tibia forwards had occurred; this was evident, on the simple inspection, from the very marked characteristics of such an accident. It is absolutely impossible to confound it, when recent, with any other lesion.

The thigh formed an obtuse angle with the femoro-tibial articulation, so that the axis of the leg was placed considerably in advance of the axis of the thigh. The superior surface of the tibia was covered by the patella, the subcutaneous surface of which presented forwards and upwards. The condyles of the femur were felt in the popliteal space under the distended skin; but the pulsation of the artery was not felt so superficially as usually described; it was obscured in the space between the condyles. The triceps projected, and the tendons of the crural muscles, inserted internally and externally into the tibia and fibula, were stretched, and formed two bent cords, posterior to the concavity. The limb was very mobile, flexed easily, and without pain; extension was more difficult, and attended with some pain. The foot turned inwards or outwards, according to the position given to the limb. The shortening did not exceed one inch and a quarter.

A swelling, scarcely perceptible, existed at each extremity of the transverse diameter of the knee. The patient suffered very little. No ecchymosis could be perceived, and M. Jacquot was inclined to think that if anything was ruptured, it must be the crucial ligaments, and some fibres of the gastrocnemii muscles; it was evident that the tendons were intact.

Extension was made, and the limb being stretched moderately by three individuals, in a few seconds the reduction was effected. A fracture extension bandage was employed for 20 days, removing it occasionally, when flexion was effected without difficulty by the surgeon, but not by the patient without the assistance of his hands. There was slight swelling the first few days which then subsided. No pain in the knee but pain in the sole of the foot and along the tendo-achillis, particularly at its insertion. This pain lasted a long period, was at times very intense, and did not appear to be caused altogether by the apparatus. When the apparatus was removed, the patient could very partially bend his leg, but, by degrees, the power of voluntary motion returned, and by the 30th of August the power of flexion was, to a great extent, recovered, and he could limp about 20 paces without assistance. The left knee was at this time still somewhat enlarged. On the 3d of September he walked without limping, experiencing only towards the evening rather more than usual fatigue.

M. Jacquot remarks that Velpeau and others deny that a dislocation of the knee can be produced by flexion or extension alone, and that this case tends to invalidate that opinion.

He gives a complicated theoretical explanation of the manner in which this happened, but the simple view of the case taken by the editor of the "Archives" is doubtless the true one. "There was not only extension of the leg, but also a rapid fall of the body towards the earth; that is to say, a force which tended to slip the condyles of the femur over the articulating surface of the tibia. It appears to us that the combination of two forces tending to produce the extension of the leg and the rapid fall of the femur downwards, might very easily produce a dislocation of the tibia forwards."—*Ranking's Abstract*, vol. i., from *Archives Générales*, April 1845.

51. *Polypus of the Rectum.* By JAMES SYME, Esq.—Sir A. Cooper states, in his Surgical Lectures, that, "in the course of his life," he met with only ten cases of

Polypus of the Rectum. Some time ago I met with five cases in the course of a single fortnight,—two of them in adults, and three in children,—and I have seen a sufficient number of other instances of the disease, to satisfy me that it is not by any means so rare as has generally been supposed. It presents itself in three different forms, of which one usually occurs in childhood, and does not appear much beyond puberty. A gentleman now established in practice, not far from Edinburgh, when attending my lectures,—then I suppose about 18 or 19 years of age,—applied to me for the removal of a polypus, such as is met with in early life, but, with this exception, I never met with it beyond the 9th or 10th year. It is extremely soft and vascular, of a florid red colour, and assumes the form either of a worm from two to four inches in length, or of a strawberry with a connecting foot-stalk two or three inches long. This tumour seldom protrudes except when the bowels are evacuated, and then admits of ready replacement, though not without occasional hemorrhage, which may be of considerable amount. The vascularity of this growth, and its attachment above the sphincter, made me averse from removing it by excision; and Sir A. Cooper has mentioned the alarm that was on one occasion excited in his practice by doing so. I have always employed the ligature; and though the soft texture readily gives way when the thread is drawn, bleeding has never occurred in a single instance, or any other symptom in the least degree disagreeable resulted from this mode of removal: I am therefore induced to regard it as the best that can be employed.

The disease appears in adults in two very distinct forms. In one of these, the growth is soft, vascular, prone to bleed, lobulated or shreddy, and malignant-looking, so as on the whole to resemble very much the cauliflower excrescence of the os uteri, but possesses a peduncle or foot-stalk of firm texture, capable of sound cicatrization after being divided. The profuse, frequent, and protracted bleeding which proceeds from this sort of growth, renders its removal an object of great consequence; and this may be effected very easily, with perfect safety, by transfixing the radical cord of connection with a double ligature, tying the threads so as to include a half of it in each, and then cutting it across a little below the constricted part. In a patient of Mr. Craig, of Ratho, (who detected the disease from the great hemorrhage it occasioned,) I could not accomplish protrusion of the tumour, but guided a ligature on my finger, and tied it on the neck within the rectum. It is more satisfactory to force or draw the swelling beyond the sphincter, so that the sound and morbid parts may be distinguished with certainty, and this can usually be done with great facility, although the growth has attained a large size. In an hospital case recommended by Mr. Anderson, of Castle-Douglas, I brought into view and removed a tumour not less than an orange, which had a most malignant aspect, and had nearly exhausted the patient by hemorrhage.

In the other form which polypus of the rectum assumes in adults, the tumour is of a firmer consistence, smoother surface, and more regularly spherical or oval form, so as to resemble the growth which in general constitutes *polypus uteri*. The symptoms resulting from this simple swelling are rather annoying than seriously alarming; and the patient, therefore, is apt to delay requiring assistance for a long while. In the case of an old lady, whom I saw with Mr. Hilson, of Jedburgh, the tumour was about the size of a cherry, with a long stalk, and we were assured had protruded every time the bowels moved for twenty years. In another case, a gentleman whom I saw with Dr. Johnson, of Cumnock, the tumour was nearly as large as an egg, had a cuticular covering, and appeared to have existed for a period equally long. I have always removed these growths in the way that has been already described, and never met with the slightest consequence of a disagreeable kind.—*Lond. & Edin. Monthly Journ. of Med. Sci.*, July, 1845.

52. *Excision of the Os Uteri, and removal of Polypus of the Uterus.* By JAMES SYME, Esq., (*Lond. & Edin. Monthly Journ. of Med. Sci.*, July, 1845.)—“Excision of the os uteri—an operation which originated with Osiander, and was improved by Dupuytren,—experienced a cold reception in this country, on account of the incredible statements connected with reported cases of its performance. Cancer of the uterus was said to be an extremely common disease,—while it was well known to be happily a rare one; and removal of the part affected was represented as permanently affording relief, with hardly any exception,—while the experience

of attempts to extirpate malignant textures in other regions of the body, led to the expectation of a very different result. When, therefore, certain surgeons of Paris published scores of cases, in which they alleged cancer to have been cured by excision of the os uteri, it was not unnaturally concluded, that their relations must, in some respect, be seriously inaccurate, and that further information was requisite before a sound judgment could be formed upon the subject.

"It now appears, that cancer of the uterus is not more common than had been supposed,—that removal of the diseased part is, if possible, more hopeless than in similar affections of any other organ,—and that operations undertaken with this professed object, through ignorance or cupidity, have proved no less useless or disastrous than was to be anticipated. But it has also been ascertained that the os uteri, more frequently than might have been suspected from the number of cases previously recorded, is liable to various morbid growths, especially that described by Dr. Clarke, under the title of 'Cauliflower Excrecence,' which, though productive of distressing or even fatal effects, are not of a malignant nature, since they exist in constitutions not otherwise unsound, and admit of complete removal by local means. So long as their treatment was limited to the employment of caustics and the ligature, no permanent benefit resulted, and it seemed as if the distinction which accurate observation had drawn between them, and the cancerous degenerations, did not lead to any substantial advantage in practice. 'Respecting the treatment of this disease,' says Dr. Clarke, 'I can offer, at present, little satisfactory information. The disease being described, and distinguished from others, is something gained. All stimulating substances, either in diet or medicine, seem to aggravate it, by increasing the discharge, and no astringents, inwardly given, which I have tried, appear to lessen it.'—(*Transactions of a Society, &c., vol. iii. p. 333, 1812.*)

"A great step in advance has been made through establishment of the important fact,—for which we are chiefly indebted to the surgeons of France,—that excision of the os uteri, executed either by knives or scissors, is an operation perfectly safe and effectual when employed for the removal of growths not possessing a malignant disposition."

In performing this operation Professor Syme says, "It is always desirable, and, in general, easily practicable, to draw the tumour fairly into view, so that the excision may be effected without taking away either more or less than what is requisite, and without injuring the neighbouring parts. The most convenient instrument for this purpose is that which Dupuytren employed—the hooked forceps of Muzeux, who invented it for facilitating the removal of enlarged tonsils—or '*vulsellum*,' as it has been improperly named by some writers, the old '*volsella*' being parent of the instruments which act upon the principle of dissecting forceps. By means of the double-hooked extremities of this instrument deeply inserted into the morbid growth towards its base, where the texture is of firmest consistence, the tumour may usually be induced by steady traction of moderate force, to descend and present itself to view, when a bistoury or curved scissors may be used without any difficulty or danger. The assistance of a speculum should be taken to insert the forceps, and if it seems necessary in order to obtain complete command over the excrecence additional instruments of the same kind are to be fixed into different parts of its substance. If the tumour cannot be made to protrude without resorting to an unsafe degree of violence, it may at all events be brought down in this way, so as to be within reach of the fingers, which will then form a safe guide for the scissors, as in the case just related. The hemorrhage is seldom more than very trivial, and when at all considerable, may be suppressed by filling the vagina with lint. In a case which happened fourteen years ago, and was, I believe, the first of the kind subjected to operation in Edinburgh, I visited the patient about an hour after cutting off the excrecence, and to my no small alarm, found the blood dropping from her bed upon the floor. As there had been frequent and profuse hemorrhage from the disease, I considered it necessary to use the most efficient means for preventing any further flow, and therefore pulled the bleeding surface into view, transfixed its base with a needle, conveying a double ligature, and tied both the threads firmly. Recovery was accomplished without any untoward symptom."

"In removing Polypus of the Uterus, evulsion, excision, and ligature have been employed, and each of these modes of operation may be rendered the most eligi-

ble by peculiar circumstances of particular cases. But in general, Professor Syme considers the combination of tying and cutting, the best. This consists in transfixing the tumour close to its base with a needle and double ligature, threads of which are tied so as to include one half in each, and then cutting away the tumour leaving merely enough of it to secure the ligature. This plan, he says, has the recommendation of facility, efficiency, and safety. It accurately determines the limit of destruction, prevents the possibility of hemorrhage, and relieves the patient from the fetor, and other unpleasant consequences, which attend the slow separation effected by ligature. Finally, it has the testimony of experience in its favour.

53. *Treatment of Burns by iced water.*—The results obtained by M. Jobert at the Hôpital St. Louis, in the treatment of severe burns, from the use of fomentations with iced water, (bladders filled with ice,) are truly remarkable, Dr. ROGNETTA states, in his *Annales de Thérapeutique*, May, 1845. This application, refrigerant *par excellence*, removes the morbid heat, limits the gangrenous suppuration, above all prevents those visceral reactions, so formidable in these accidents, and places the tissues, adjoining the disorganized part, in the most favourable condition for reparation. If the burn be an extensive one, engaging a large surface of the body, the cold bath is used repeatedly; and in the intervals, the injured parts are kept covered with large pledgets of cloths steeped in cold water, and covered with bladders of ice. We have seen patients recover under this treatment, who in all probability would have perished had it not been adopted. Very lately a workman was brought to the hospital, who, having fallen asleep with his clothes on, and a lighted candle beside him, the former caught fire. He was severely burned over the whole of the left shoulder, corresponding side of the neck, clavicle, and upper part of the arm. The injured parts were covered with cloths slightly spread with cerate, they were then sprinkled with iced water, and enveloped in bladders half-full of ice. A bleeding was prescribed, with low diet and refreshing drinks. General reaction was completely checked by this treatment. The eschars being about to separate, the ice was replaced with simple applications of cold water, and everything at this date appears to indicate a happy termination of the case. We might give many other cases equally severe, and many more so—as for instance the immersion of the whole lower extremities, with the hips and loins in boiling ley—successfully treated by means of continued cold baths, and applications of iced water. The patients feel refreshed, the pains abate, the fever diminishes, they enjoy sleep, the restoring powers of the organism are strengthened, and a more or less speedy cure takes place.

Much has been written on the subject of burns. New remedies for their treatment, or remedies which had fallen into disuse, but again revived, are every now and then submitted to our attention. These are occasionally well received; but they soon undergo the fate of their predecessors, and are silently put aside to make way for something new. We shall not at present stop to inquire the reason of this versatility of practice, equally prevalent in ancient times as in our own day. We may merely say that many of these remedies have been positively noxious and bad; carded cotton, for example, which, by some, has been lately much lauded. It is difficult to conceive how any one can rest satisfied with treating a burn, regardless of the amount of injury sustained, by merely covering the injured part with cotton, a non-conductor of caloric, which maintains, increases, and accumulates the very principle of the disease which it is introduced to combat. It is quite evident that by this practice, a burn of the second degree seems to pass into one of the third, by the accumulation of caloric, which converts the simple inflammatory reaction into one of gangrene or eschar. To illustrate the positive evil of all this, we shall enter into some details.

It has been assumed, by a vulgar prejudice, that burns continue to progress after their formation, that is to say, that eschars, which did not exist immediately after the accident, are afterwards formed, and extend for some days. This prejudice has been overthrown by science; for it has been shown that mortification occurs the moment the caloric is applied, and at places, moreover, where nothing is appreciable, but where eschars appear at a later period. This doctrine, however, must not be taken in a rigorous sense, as it overlooks the mortification which

occurs spontaneously with the phlegmonous reaction, a reaction in itself of a gangrenous nature, independently of the primary action of the caloric. It is a fact, that for a time the burned parts are very warm; they still preserve a quantity of caloric, insinuated and accumulated in the tissues. We verified this fact very lately, on applying the actual cautery to the inguinal region. Our fingers applied to the hypogastrium, for the purpose of fixing the parts, felt for some time the action of the caloric applied at a distance,—the whole adjacent tissues were of a burning heat for a short period. It is true, therefore, that burns progress and extend, either by the accumulation of caloric in the tissues themselves, or by the gangrenous reaction which its presence excites. The natural conclusion from these observations is, that the primary and fundamental indication in the treatment of burns, consists in the withdrawal, by every possible means, of the caloric accumulated in the injured part, whether it be that communicated by the original burn, or that caused by reaction, which acts in a similar manner. To accomplish this we have only one remedy, iced water, or ice itself. It is, therefore, evident that the best and most soothing remedy in severe burns is the cold bath. Why, then, is this treatment—the only rational and efficacious one—so little practised in our day? Simply because cold water is too common a thing, and there is a mania for specifics; cotton comes from the east, and in the eyes of many there is something balsamic about it, and M. Mayor moreover has discovered in it some occult qualities!! What are its effects? Pools of pus under disgusting, hard, and irritating crusts of cotton, which adhere to the ulcerated surfaces, and the duration of which is indefinite? As regards medicines, we truly live in a period of the most desolating empiricism. In pathology we reach to the sublime; therapeutics should flow as a natural consequence from it, but experimental inquiry regarding it is disdained. The most simple reasoning is abandoned, and everything is given up to chemistry, as if matters were conducted in the living organism, as they are in our retorts. These remarks are directed against certain compositions, the efficacy of which has been much vaunted, which without being positively hurtful, take the place of more certain remedies. It is paradoxical and absurd to talk of *curing* a burn,—we cannot cause a part in a state of vesication, or mortification, and covered with an eschar, to retrograde; but there are important indications to fulfil, in order to prevent the progress of these, as well as to ward off serious visceral reactions, and alleviate pain. These indications cannot be fulfilled by such and such an application, and to oppose to such conditions handfuls of cotton, or, what is still worse, the caloric box of M. Guyot, implies a total abandonment of everything like reason or logic. [If *reason* and *logic* do not sanction the use of cotton in burns, *experience* at least has fully shown its utility, and we cannot, therefore, but suspect that our respected colleague has allowed his prejudices to bias his reasoning.—ED.]

54. *Diagnosis of Aneurisms of the large Arteries.*—The *Revue Médicale* for Dec. last, contains an interesting article on this subject, by M. A. N. GENDRIN, Physician to La Pitié. We give the following analysis of it from the *Lancet*.

The symptoms by which aneurisms may be recognized are to be sought for in the rational appreciation of the modifications which their presence necessarily produces in the phenomena of the circulation. They may be examined in *visible aneurisms*, or aneurisms which have already made their appearance externally; in *latent aneurisms*, or aneurisms which have not manifested their presence externally; and, lastly, they may be studied separately, in each of the large arteries of the body.

In visible aneurism, the tumour is always situated on the course of an artery; it is spherical, or ovoidal; sometimes, but rarely, fusiform. The patient suffers continued pain, with pulsations isochronous to the arterial diastoles. The skin is in a normal state, except when about to give way under the influence of the pressure. On examining by the touch, pressure is found to be painful. The tumour is elastic, and may sometimes be depressed completely, sometimes only partially. It is the seat of pulsations isochronous with the arterial pulsations, and of a movement of expansion more or less marked, which is sometimes accompanied by a sensation of tremor, the sibilous and sonorous vibrations of which may be perceived under the fingers. To these, the symptoms given by most authors, M.

Gendrin adds the following:—Each impulsion, isochronous to the arterial diastole, is followed by a retraction of the tumour, easily appreciated by the hand, which retraction is accompanied by a tremor (*fremissement*) quite distinct from that which corresponds to the diastolic shock. In aneurisms of the large arteries, the retraction is nearly always followed and terminated by a second impulsive shock, which corresponds exactly to the systole of the artery. It consequently follows, that on these tumours two alternate shocks may be distinctly appreciated, the first of which corresponds to the diastole of the artery, and the second takes place between it and the following diastole. These double pulsations always exist in aneurisms of the large arterial trunks, and are pathognomonic. They suffice to enable us to distinguish aneurisms from tumours which receive the impulsive motion from voluminous adjacent arteries. The latter only present one impulsion isochronous with the arterial diastole.—If pressure can be exercised on the artery between the heart and the tumour, the pulsations are arrested in the aneurism. Pressure exercised on the artery below the aneurism does not arrest the pulsations, but it modifies them. If they are single, they persist, but become short, and communicate to the hand a more sudden shock, but are followed by appreciable retraction. If they are double, the second *disappears* completely. These modifications are best studied on the descending aorta, the abdominal aorta being compressed.

On applying the stethoscope to an aneurismal tumour, a percussion sound, isochronous with the arterial diastole, is heard, accompanied by a well-marked impulsion. This impulsion is followed by the progressive retraction of the tumour, which ends by a second percussion sound, the intensity of which is the greater, the larger the caliber of the diseased artery. This second impulsion sound is always present in aneurism of the large arteries, and is even accompanied by an evident impulsion. It is slight, and without impulsion, in aneurism of middle-sized arteries, and absent in those of a third order. The first percussion sound is often followed by a blowing, dry, rugous, friction sound, sometimes tremulous and dull, sometimes sibilant. This friction sound lasts during the entire period of retraction of the tumour, progressively diminishing in intensity. When there is a second percussion sound, the latter terminates it. In large aneurismal tumours, the friction sound is sometimes absent, or so short and feeble as to be perceived with difficulty, and only after increasing the energy of the circulation by muscular efforts on the part of the patient. It is not very rare to find this friction sound presenting a double character in large aneurismal tumours of the aorta. It then constitutes a kind of go and come sound, occurring between the two percussion sounds. On applying the stethoscope above and below an aneurismal tumour, along the course of the artery, we often hear a friction sound isochronous with the arterial diastole. This sound is evidently the result of the lesions that exist in the tumour as it diminishes and disappears as we recede from the tumour. When it is caused by arterial induration, on the contrary, it persists, and is often most decided at a distance from the tumour. If the pressure exercised on the arteries above an aneurismal tumour is not carried far enough to interrupt the passage of the blood, it will increase or even create the friction sound isochronous with the arterial diastole, but diminishes or even interrupts the percussion and impulsion sound. All these phenomena are the necessary results of the circulation of the blood in the diseased cavities, and admit of easy interpretation.

1st. Each time that the column of blood, expelled by the impulsion of the heart, distends the arterial parietes, the blood driven into the cavity of the aneurism exhausts its impulsive force on the parietes of the sac. Thus originates the impulsive percussion isochronous with the arterial diastole, which gives rise to the expansion perceived by the hand on the tumour, and to the first percussion sound.

2d. The aneurismal sac, distended by the blood driven into its cavity, contracts progressively on itself, in the interval of the arterial diastole, and thus the retraction of the tumour is produced which follows the first impulsion and percussion sound.

3d. The intensity and the extent of the expansive pulsation of the aneurism and of the retraction which follows are modified by the size of the cavity of the sac, and by the volume of the fibrinous stratified clots which it contains. Thus, indeed, is explained the great differences which exist in various aneurismal

tumours, or in the same tumours at different epochs, with reference to the extent and form of the impulsion, &c.

4th. The margin of the orifice of the aneurism in the artery being often rugous, and presenting protruding filaments, or free fibrinous lamellæ, sonorous vibrations are produced by the friction of the column of blood which penetrates into the aneurismal sac at each arterial diastole. It is these sonorous vibrations which produce the dry, rugous, friction sound, and the tremulous shaking of the tumour isochronous to its pulsations. When the tumour retracts on its contents, the same physical phenomena accompany the return of the surplus of the blood into the arterial canal, and thus is produced the prolongation of the friction sound, and sometimes of the tremulous motion which is perceived during the retraction of the tumour.

5th. The systole of the heart propelling the blood into the arteries causes their diastole, as well as that of the aneurismal sac. The parietes of the sac retract on themselves slowly, owing to the destruction of the middle arterial membrane, to the presence of the stratified clots, and to the fact of the blood having to return into the artery by a small orifice. The parietes of the artery above and below, on the contrary, being healthy, contract on the blood which these contain, as soon as the diastolic impulsion of the heart is exhausted. Consequently, as there is not exact synchronism between the retraction of the tumour and that of the arteries, the arterial reaction suddenly arrests the aneurismal retraction. If the arterial reaction is powerful, as is the case with large arteries, it drives back a certain portion of the blood into the aneurismal sac. Thus, a second shock is produced, which, although weaker than the first, is, nevertheless, very evident. This second shock is the most marked in aneurisms of the aorta and its first subdivisions, from the middle tunic, above and below the tumour, becoming hypertrophied. It is easy to understand that this second shock may be accompanied by a friction sound.

Latent Aneurism.—The presence of all the above symptoms is not necessary to enable us to recognize a visible aneurism, but a knowledge of their existence is of the greatest value in the diagnosis of latent aneurism. In the latter, the tact is sometimes useful, as when a thoracic aneurism is in contact with the parietes of the thorax, and in abdominal aneurism, in which the parietes of the abdomen may generally be so depressed as to allow of the tumour being felt. All deep-seated aneurismal tumours are perfectly immovable. The pulsation of a deep-seated thoracic aneurism, when perceptible to the hand, is double; the first corresponds to the arterial diastole, the second to the arterial systole. In thoracic aneurism, when the tumour has displaced the lungs, there may be absence of sound on percussion. There may also be a vibratile friction sensation, but as this sensation may be produced by an indurated artery, it is not pathognomonic. Auscultation furnishes the most important signs. The principal one is the percussion sound. It is isochronous with the arterial diastole, is single in mere arterial dilatation, always double in aneurism of the large splanchnic arteries, with perforation of the internal and middle tunics. It is very similar to the double percussion sound of the heart, from which it is difficult to distinguish it in the thorax. In order to arrive at a correct diagnosis, the seat of its greatest intensity must be carefully ascertained. If that greatest intensity is not where the sounds of the heart are heard with their summum of intensity—that is, from the synchondro-sternal articulation of the fourth rib, to that of the second,—the double sound is, probably, owing to aneurism. The double percussion sound of the aneurism is not, either synchronous with the normal sounds of the heart. The first percussion sound is heard after the systole, which it continues, and the second always precedes the diastole, so that sometimes four percussion sounds are heard, joined two by two, the second and fourth being, as it were, the echo of the first and third.

The percussion sounds of an aneurism, whether single or double, are often accompanied by dry, rugous blowing, or sibilant friction sounds, the cause of which we have already explained. Their presence renders the diagnosis less difficult; they are easy to distinguish from friction sounds developed in an indurated artery; the latter run along the artery, whereas the former are confined to the vicinity of the aneurism, and accompanied by a percussion sound. When an

indurated artery is also the seat of an aneurism, the friction sound, rugous along the artery, becomes sibilant at the aneurism. The friction sound may present itself under the form of a go and come sound, in which case it is always circumscribed between the two percussion sounds. It represents the motion of the blood penetrating into the aneurism, and then leaving it again. All these symptoms may sometimes be perceived on the posterior region of the body, as well as on the anterior.

The pain experienced by the patient is constant, but subject to exacerbations. It is owing to the inflammation which exists in the parietes of the sac, and which extends by contiguity to the neighbouring parts. Deep-seated inflammation existing along the course of the larger vessels is accompanied by the same kind of pain, so that, in order to establish the diagnosis, it is necessary to take into consideration the presence or absence of the percussion and friction sounds of aneurism.

Aneurism of the larger arteries is nearly always accompanied by palpitation and dyspnœa. The existence of these symptoms does not indicate the presence of organic disease of the heart. They may be merely sympathetic phenomena. As, however, hypertrophy of the heart and chronic endocarditis, with or without valvular disease, is by no means uncommon in aneurism, the sounds of the heart and the precordial region must be carefully examined.

Varicose dilatation of the veins sometimes supervenes, owing to the pressure of a deep-seated aneurism on the large venous canals. As, however, the same symptom may be produced by the pressure of any other tumour, the diagnosis can only be established by the other symptoms which we have enumerated.

55. New application of Electricity to Surgery.—Dr. SMEE has made a novel application of electricity for the detection of needles and other steel instruments impacted in the human body. The following extracts, from the *Philosophical Magazine*, explain the *modus operandi*.

" You are all acquainted with the curious condition which steel assumes under certain circumstances, whereby it evinces properties which are called magnetic; you know, moreover, that like magnetic poles repel, and opposite attract each other. You have therefore but to render a piece of enclosed steel a magnet, and you will be able not only to ascertain its presence, but to determine by its polarity its general direction; and by the amount of magnetism it evinces, you may even infer its probable bulk.

" When you suspect the presence of a piece of needle, or other steel instrument, you must subject the suspected part to a treatment calculated to render the needle magnetic; and there are two principal methods by which this object may be effected;—the first, by transmitting a galvanic current, at right angles, to the suspected part; the second, by placing a large magnet near the part affected, so that the object may be magnetized by induction. You may accomplish the first end, by taking a copper wire, covered with cotton, or still better with silk, (in fact, you may employ the covered wire as generally used for the formation of electro-magnets,) and wind it round the parts suspected to contain steel, several times so that the same current may act at right angles, many times, upon the piece of steel; you may then take a galvanic battery (one of my little tumbler batteries will amply suffice,) and connect one end of the wire to the zinc, the other to the platinized silver. The current might be continued for half an hour, or more, when the steel would become magnetized, and thereby give strong indications of its presence.

" For my own part, I should use the second plan, or the plan of magnetizing by induction, to render the needle magnetic. For this purpose I have employed a temporary electro-magnet, which I magnetized by the voltaic battery, and you will find that by keeping the part affected as close as possible to the instrument for about half an hour, you will sufficiently obtain the desired object.

" The electro-magnet might be made of the horse-shoe form, if we knew the direction of the object; but in that case we should not require its use at all, as the proof of the existence of the needle is our only aim. I have used the horse-shoe magnet, but should prefer, in most cases, an electro-magnet like this, made for me by Messrs. Horne, of Newgate-street, which is made of a simple straight bar

of soft iron, wound round with wire. Your chemical lecturer has, doubtlessly, made you aware that the magnetic effect is proportionate to the power of the battery, so that if you were desirous of producing but slight effect, you would employ this tumbler battery; but if you required the action to be manifested at a greater distance, you would use a compound battery, such as this trough battery upon the table. The compound battery will magnetize a needle, in conjunction with the electro-magnet, in the space of two or three minutes. A powerful permanent magnet would answer as well as the temporary magnet; but it would be very expensive, and not so constantly at hand. When soft iron is impacted in any part of the body, we do not require either the electro or permanent magnet, for on this substance we are unable to confer magnetic properties.

"To test the existence of a magnet within the body, we may take a magnetized sewing needle, and suspend it by a piece of silkworm's silk, when it will exhibit certain phenomena upon the approach of the suspected part, provided it contain a piece of magnetized steel. Although this simple contrivance will amply suffice, I myself possess a needle which was made for me by Messrs. Willats, of Cheapsides, and which is well adapted for the purpose.

"It consists, as you perceive, of a delicate needle, about six inches long, centred upon a small agate cup resting upon a steel point; so that the smallest possible amount of resistance is offered to its free play.

"When a part containing magnetic steel is brought near the needle, it may be either attracted or repelled, it may move upwards or downwards, or it may exhibit disquietude according to the position in which the new magnet is held. We may detect the position of the foreign body, when it is of any size, by ascertaining where its north and south poles lie, and these are determined by their repelling and attracting the opposite poles of the magnetic needle. The disquietude, or motion upwards and downwards, merely indicates magnetism, but not the direction of the magnet.

"You will, doubtless, be surprised when I tell you, that in this manner I have detected a piece of needle impacted in the finger of a young woman, although it weighed but the seventh of a grain. This gave such marked indications, that I found out tolerably well the position of its north and south poles, though I could not ascertain the presence of a foreign body in any other way. I tried experiments on smaller pieces, at short distances, such as half an inch to an inch, and I found that a piece of needle, weighing 1-60th of a grain, gave decided indications after having been magnetized, and perhaps even a still smaller amount of steel might in some cases be detected.

"I have now satisfactorily demonstrated to you, that magnetism may be used for the detection of steel particles impacted within the body with absolute success; and though but a very trifling application of natural philosophy to the practice of surgery, I have no doubt that, had it been adopted before, many joints would have been saved; and I confidently anticipate that it will be the means, in future, of frequently saving these parts from destruction."

56. Perineal and Lumbar Operations for Artificial Anus.—At a late meeting of the Surgical Society of Ireland, Sir P. Crampton, the president, communicated some facts tending to settle the hitherto undecided point as to whether the power of retaining the feces continues after the perineal operation for artificial anus as recommended by M. Amussat. He detailed the results of an operation for artificial anus performed by M. Amussat, in a child, about nine years since. During the subsequent period he (Sir Philip) had had frequent opportunities of examining the condition of the child. The nature of the congenital deformity was as follows:—"The vagina and anus were both naturally formed externally, but the rectovaginal septum was deficient above, and only existed inferiorly to the extent of about one-third of an inch, so that the finger could be passed from either canal into the other. The upper portion of the rectum had no communication with the cloaca common to the vagina and the anal portion of the rectum, but its closed extremity could be felt at a height of about two inches towards the left sacro-sciatic angle. The anus thus communicated directly with the vagina above the imperfect septum already mentioned, but had no connection with the rectum,

which terminated two inches above it, and was, in fact, properly speaking, deficient to that extent. Under these circumstances M. Amussat determined to make an incision anterior to the coccyx, but posterior to and not involving the vaginal anus, to detach the posterior wall of the vagina from the coccyx and sacrum with the finger or the knife, to reach the cul-de-sac of the rectum, seize it with a hook, detach its entire circumference rather with the finger than by the knife, draw it down to the external wound, open it freely, give exit to the meconium, and secure, by points of interrupted suture, the edges of the opening in the intestine to the lips of the cutaneous wound." For two months the child went on well, the opening being maintained by the introduction of an ivory stopper, not much thicker than a full-sized quill. The introduction of the stopper, however, became more and more difficult every day, and, at length, it was found impossible to introduce it. The child was then brought to Sir P. Crampton, in the following state:—She passed, with considerable pain, a small quantity of semi-fluid feces, and appeared in great agony, under which she must very soon have sunk. He enlarged the opening to such an extent as to receive a bougie of sufficient size, the introduction of which it is still necessary to repeat for a few hours almost every day. Sir Philip considered that this case resolved the doubtful question, as it appears that the rectum has full power of retaining the feces, and proved that M. Blandin's apprehension that incontinence of feces must be the result of the perineal operation, in consequence of the non-existence of a sphincter, is without foundation. Dr. R. Coulter then read the history of a case in which Sir P. Crampton had operated on a male infant, for imperforate anus, about four years previously. A septum (evidently of a fibro-cartilaginous structure) had existed about an inch and a half above the anus. On the third day after birth Sir P. Crampton passed up Weiss's exploratory needle through the septum, withdrew it, and found that its groove was filled with meconium. This having decided the nature of the contents he at once introduced a large-sized trocar through the septum, and immediately the meconium gushed out with considerable force. A small flexible hollow bougie was kept constantly introduced, its size being increased weekly until the largest could be introduced. This had the effect of keeping open the aperture, and preventing any contraction, and after the expiration of four months it was not found requisite to use the instruments further. After the lapse of six months Dr. Coulter had no occasion to attend upon the child. At present the child was well-grown, and appeared in excellent health. At the distance of about an inch and a quarter above the anus a contraction existed in the rectum, like the remnant of a membranous diaphragm with an annular perforation in its centre, through which the end of the little finger could be passed by exerting a moderate degree of pressure. The mother stated that the passage of the feces appeared to be unattended with pain or difficulty. Dr. O'Beirne conceived that M. Amussat's case produced abundant evidence of the fact which he himself had endeavoured to establish, viz., that the existence of a sphincter was not absolutely necessary to the retention of the feces. His work would, he believed, be found to furnish an explanation of that point, which was to be attributed to the contracted state of the upper portion of the rectum. From inquiries he had made of several obstetric authorities, it appeared to be the conjoint opinion of those gentlemen that when, in parturition, the child has torn through the whole recto-vaginal septum, the mother is known to possess the full power of retaining the feces. Dr. O. B., in illustrating the safety with which the most obstinate constriction of the bowel, in what is called "spasmodic stricture" of the rectum, may be overcome, described the manner in which the lower bowel is affected in cases of tetanus. Of all the diseases in which constipation is most obstinate tetanus is certainly the one. In some cases of this disease, which had terminated fatally, he succeeded in passing the instrument to a considerable height, but only by means of long-continued, gradually increasing, and determined pressure against the point of resistance: when he first used this force he remembered the instrument passed rapidly upwards, as if through a narrow ring, giving to his hand a sensation as if he had perforated the walls of the intestine; accordingly, he withdrew the tube, and was much pleased to see its extremity coated with feces, and bearing no marks of blood. This circumstance had occurred to him in many instances. In those cases it was found, after death, that the whole of the colon was so enormously distended as to conceal the other intestines,

and to equal in size the thigh of a very large man, while the uppermost part of the rectum was contracted to the diameter of a barrel of a quill; but felt much firmer, and this without appearances of any organic change in the structures of the part, or any sign of thickening other than that caused by the powerful contraction of its fibres upon themselves.

During the discussion, allusion was made to the fact that, in the formation of an artificial anus in the lumbar colon, the great difficulty arises from the want of means of distinguishing the colon from the small intestine. Sir P. Crampton, however, mentioned that M. Amussat has discovered a sign, which, if not actually diagnostic, (for perhaps it could not always be appreciated,) yet bid fair to do much towards removing the difficulty in question, and had actually removed it in M. A.'s last operation: this sign rested on the fact that the small intestines sustained a motion of alternate ascent and descent corresponding to expiration and inspiration, in which the lumbar colons did not participate; if, therefore, the exposed intestine presented this oscillation, it was small intestine; if it did not, it might be presumed to be the colon.—*Dublin Med. Press*, March 5, 1845.

57. On the possibility of diminishing the Volume of Herniæ, and aiding their reduction by Internal Treatment. By Prof. DIEFFENBACH.—“It is possible even in many cases in which the taxis has failed, to procure a most advantageous result by internal treatment. This treatment consists essentially in causing the patient to maintain the recumbent posture for a long period, instituting at the same time a certain dietetico-pharmaceutic regime. The number of cases in which the author has been successful is surprising. Those who, in consequence of the immense size of their hernia, were unable to wear a truss, have by this means had the volume of the tumour so much reduced as to render the application of that instrument both safe and efficacious. M. Dieffenbach commences the treatment by confining the patient *bonâ fide* to bed; he will not allow anything short of this, for if the patient be permitted to recline on a sofa in his day costume, or to sit up in bed even, the beneficial effects of the plan are entirely done away with. The patient then takes, morning and night, Pulnha water in doses sufficient to ensure watery stools. It is, however, of importance not to persevere too long in drastic purgatives, but to vary them by the occasional substitution of the compound rhubarb pill. Eventually he gives nothing more powerful than castor oil.

“During the whole of this treatment, food either of a very nutritious or indigestible character must be carefully interdicted. Indeed, the aliment should always be given in the form of broth. The tumour should at the same time be submitted to local treatment, varying it according to the nature of its contents. If the hernia contains only intestine, and there is no adhesion, cold compresses are indicated; if, on the contrary, omentum forms part of the tumour, warm fomentations will be more suitable.

“By these means, M. Dieffenbach states that he has frequently seen the most voluminous hernial tumours diminished by half in the space of eight days.”—*Ranking's Abstract*, vol. i. from *Gaz. des Hopitaux*, No. 10.

58. Fracture of the Neck of the Femur with Penetration of the Trochanter.—M. ROBERT, Surgeon to the Hôpital Beaujou, is of opinion that for the production of a fracture, with penetration of one fragment of bone into the other, it is requisite that the bone should present a conical form, so that the fracture occurring near the base of the cone, the smaller portion may pierce, and be imbedded in the larger one; that it should decrease in density from the summit to the base of the cone; and lastly, that the cause which occasions the fracture should tend to bring the extremities of the bone forcibly together.

M. Robert shows that the neck of the femur presents the anatomical characters just enumerated,—since being narrower in the middle than at its extremities, it may be compared to two truncated cones, the one short and round, corresponding to the head, the other larger, and merging into the trochanters; again, the neck of the femur consists externally of a layer of compact tissue, giving origin from its inner surface to a multitude of laminæ, which converge towards the head of the femur, and by crossing form an areolar tissue with very close meshes; inferiorly, on the other hand, the cancellated structure of the neck of the bone is less

close ; hence these conditions render difficult the penetration of the head of the femur, by the inferior fragment, but greatly facilitate, and render almost inevitable, the entrance of the lower part of the neck into the trochanter, or upper part of the body of the bone. Almost all fractures of the neck of the femur are the result of falls upon the great trochanter. Of fifty-seven cases recorded by Sabatier, Dessault and W. Smith, one only was occasioned by a false step.

The lower and inner part of the neck being continuous with the anterior surface of the body of the femur, whilst it is separated from the posterior face by a well-marked cavity, and by the projecting line which descends from the great to the small trochanter, accounts for the penetration being almost always in front, as well as for the rotation of the limb outwards. Indeed, the axis of the neck of the femur corresponds to the anterior third of the great trochanter, and the fall occurring upon the middle part of this apophysis, tends to efface the digital cavity, as well as to bring into contact the inner surface of the great trochanter, and the posterior surface of the neck, and to cause the protrusion of the latter anteriorly, so that the point fractured forms with the body of the bone an obtuse and prominent angle,—whence results the rotation of the limb outwards.

M. Robert observes that penetration is rare in intra-capsular fractures ; he cites one example only, existing in the Musée Dupuytren, where the penetration was incomplete, and limited to the inferior and posterior part of the base of the neck.

On the other hand, it appears from the observations of various authors that although penetration is frequent in extra-capsular fractures, it is common only in old persons, especially those in whom the neck of the femur is voluminous. These fractures are usually seen in the base of the neck ; anteriorly, they follow the line which extends from the great to the small trochanter ; posteriorly, they are seen at one-fifth to one-fourth of a line from the slight ridge which connects these eminences ; they frequently terminate above the small trochanter, but sometimes pass beyond it. The angle formed by the neck with the body of the bone is diminished, and sometimes the neck undergoes a rotatory movement upon its own axis. Mr. Adams has recorded an instance where the fracture was incomplete, the upper border preserving its integrity, whilst the inferior surface was forced into the cancellated texture of the body of the bone. Penetration may be complete or incomplete ; the latter being much the more frequent. Extra-capsular fracture of the neck of the femur is generally associated with fracture of the great trochanter, but this complication never exists in intra-capsular fractures.

M. Robert enumerates the following as the principal symptoms of the fracture of the femur with penetration : (1) slight shortening of the limb ; (2) almost constant, but often slight deviation of the limb outwards ; (3) pain, more intense and external, than when the fracture is intra-capsular. These are constant and most characteristic symptoms. (4) Ecchymosis upon the outer part of the thigh ; (5) swelling over the situation of the great trochanter ; (6) the capability of walking after the fall which had occasioned the fracture ; (7) the capability of raising the limb as a whole ; (8) the resistance of the limb to any attempts at extension. Upon this last symptom, M. Robert finds a caution as to the treatment of patients who have sustained this accident ;—reprobating repeated attempts at extension and rotation of the limb.

The prognosis is more favourable in these cases than in those without penetration, as the position of the fragments favours consolidation, so that the patient may move a little about the forty-fifth or fiftieth day.

The author's conclusions respecting the treatment are—that the surgeon should abstain from exercising traction upon the injured limb ; that it is necessary to maintain it in a state of immobility ; and that a constant lateral pressure should be exerted upon its outer surface. To accomplish these indications he places the patient upon his back, with a small cushion under the ham of the injured limb, and surrounds the hips with a tight bandage.—*Lond. Med. Gaz.*, May, from *Bulletin de l' Acad.*, 1844.

59. *Case of Tubular Aneurism undergoing spontaneous cure ; with observations.* By J. LUKE, Esq.—Wm. Dobbins, aged 31, dock-labourer, a stout muscular man, in the enjoyment of good general health, and temperate in his habits, was admitted into the London Hospital, Feb. 19th, 1845, on account of a tumour, which occupied

the upper part of the right thigh. The tumour was of an oblong form, extending from Poupart's ligament down the thigh between three and four inches, in the direction and situation of the femoral artery, and projecting anteriorly more considerably near its lower extremity than at its upper. The transverse measurement of the tumour, immediately beneath the ligament, was about two inches, increasing in its descent to nearly three inches. There was very strong pulsation uniformly over its whole surface, which caused the finger to be raised perceptibly when laid on it. The tumour enlarged at each pulsation equally in all directions, so that the fingers were forced asunder during each pulsation, and were again approximated at its termination. A lymphatic gland or two lay anteriorly, but the tumour was otherwise compressible, and capable of being emptied of its contents, yet filled again on the remission of pressure. There was not any sound or bruit discovered when the stethoscope was applied, nor did the patient complain of any pain in the part. He, however, had a feeling of weakness in the limb generally, which prevented him from carrying burdens such as he had been accustomed to carry. He also experienced a slight lameness, and an occasional cramp, in the muscles of the calf. The temperature of limb was not diminished, and the arterial trunks below the tumour pulsated as strongly as in the opposite limb. There was an old cicatrix of a bubo in the groin.

He stated, that the first discovery of the tumour was made about a year before his admission, when undergoing an examination before entering into a club. It did not then give him any inconvenience, nor can he assign a cause for its origin, but thinks it probable that it was produced by lifting heavy weights. He is of opinion that it was as large when first discovered as it is at present. He thought nothing of the tumour for six months, at the end of which, when running, he was suddenly seized with cramp in the muscles of the thigh and calf, and pain in the groin, which latter induced him to put his hand to the part. Although not enlarged he found the swelling pulsated more violently than before. From that period the leg had become stiff and weak; slight exercise also brought on cramp, with an increase of pulsation and pain in the tumour. There was also an occasional feeling of coldness in the limb.

With a conviction on the mind that the tumour was aneurismal in his character, it was thought improper to place implicit credence in the patient's statement, that it had not increased in size since its first discovery. He was, therefore, placed in bed, with the intention of determining by personal observation whether or not it underwent any increase in its dimensions; the determining of this point being necessary to guide the opinion and the advice as to the course best to be pursued in his case. It was thought that the application of a piece of adhesive plaster spread on leather, and of a spica bandage over it, was quite compatible with these intentions. They were accordingly applied over the tumour March 3d, and not again disturbed until the 8th. On their removal on this day, it was found that a considerable change had been effected in the tumour. Instead of being soft and compressible, and capable of being emptied of its contents, it was hard and unyielding, and slightly painful on pressure. It was further observed that its pulsation had entirely ceased, as well as the pulsation of all the arterial trunks of the limb; the femoral, popliteal, and anterior and posterior tibial arteries, having in turn been examined. The foot and leg felt colder to the hand than the opposite, although the thermometer did not indicate any actual diminution of temperature. While collecting information respecting a state of things so unexpected, the patient stated that when the plaster and bandage were first applied he experienced considerable pain in the tumour for about half an hour, attended by an unusually violent throbbing, which perceptibly raised the bandage. At the end of that time the throbbing ceased, and there had not been any return. The plaster and bandage were reapplied, and the limb was wrapped in wool.

On the 22d of March the tumour was still hard, consolidated, and without any pulsation. There was apparently an obliteration of its cavity, the contents of which had undergone some diminution from absorption. Mercurial ointment spread on lint was applied, and the patient allowed to move out of bed.

April 2d.—He has walked about, and, he states, with greater ease and freedom than when admitted; but the pain in the calf remained.

19th.—Has left the hospital for about ten days, but, as requested, paid the hos-

pital a visit to-day. He still complained of pain in the calf, especially when going up stairs. There was also numbness of the foot at times. The circulation was apparently restored sufficiently for the proper nourishment of the limb, yet pulsation had not returned in any of the arterial trunks. The size of the tumour had undergone very considerable diminution, and the aneurism had been without doubt cured.

In the intentionally brief remarks which I propose to make upon the above very interesting case, I would wish to first call attention to the unsatisfactory use of terms employed to distinguish the different kinds of aneurismal diseases from each other. It may be generally asserted that any change of terms in common use is decidedly objectionable so long as they convey definite ideas; but when they fail to do this, a change becomes desirable. It is for this reason that the terms *true* and *false*, and *diffused*, as applied to aneurisms, are unsatisfactory; because they failed to convey a meaning uniformly of the same import to all, and require some circumlocution for their explanation. Thus, some surgeons employ the term "true" to designate all kinds of aneurisms in which a sac is formed as a result of disease; whilst others restrict it to dilatation of the tunics only. Again, others exclude the uniform dilatation of the tunics altogether, and mean merely by the term a partial dilatation of one side of an artery. So also the term "false" is used to designate all aneurisms without previous dilatation of the tunics, whether they are the result of ulceration, rupture, or wound; while some apply the term "diffused" to aneurisms arising from the latter cause. However much I may generally be indisposed to change terms, I think these may with advantage be allowed to become obsolete, especially as others may readily be found which will designate the particular forms of disease by their own import.

Thus the different kinds of aneurism may conveniently be thus designated:—
 1st. To the most common kind, characterized by the existence of a sac, the term "saccated" may with propriety be applied as simply indicative of that fact, without entering into any speculations as to the means by which the sac is produced. If we wish to make distinctions of the saccated form, we might use the term "traumatic" for those forms of it which are the result of wound. 2dly. There is a form of aneurism characterized by a pretty nearly uniform dilatation of the tube of the artery, of which the case above related forms an example. This, by some surgeons, has been considered not to be aneurism at all; while by others it has been regarded as the true form of that disease. From the circumstance of the tube of the artery undergoing a pretty uniform dilatation, I think that the term "tubular" would not be inappropriate, and would express adequately the kind of disease meant to be designated. 3dly and 4thly. The terms "dissecting aneurism" and "varicose aneurism" are sufficiently expressive of the forms of disease to which they are at present applied, and need no further observation. But 5thly. The term "aneurism by anastomosis," as it involves an hypothesis, may be advantageously changed for "capillary aneurism," as merely conveying an idea that the minute or capillary vessels are the structures affected. Thus we have—

1. Saccated aneurism, including traumatic,
2. Tubular aneurism,
3. Dissecting aneurism,
4. Varicose aneurism,
5. Capillary aneurism;

under which terms may be embraced every known variety.

With regard to the case above related, the first circumstance which calls for comment is the external form of the tumour. In this respect it is generally by no means so globular as the saccated disease, but is usually oval, or rather fusiform, with the long axis lying in the course of the arterial trunk. The external form results from the manner in which the disease is developed, which, in cases similar to the above, is by a limited but pretty uniform expansion of the arterial tunics, with a corresponding enlargement of the area of the vessel at its dilated part. The extent of the vessel so dilated varies, but above and below the diseased part the artery retains its healthy dimensions. From this state of things arise some important considerations.

It will be recollectcd, that in saccated aneurism the blood is thrown out of the course of the circulation into the sac, where, probably, the influence of the current

is so far diminished in certain cases as to allow the contents to become partially quiescent, and thereby disposed to coagulate. In the tubular form, however, the whole force of the current passes through the centre of the dilated part, and must obviously tend to counteract any disposition to coagulation of the blood contained therein. It is to this cause that the absence of solid contents has been usually attributed, as well as the greater softness of the tumour, and its capability of being entirely emptied by pressure. We might also be disposed to think that in this circumstance we see a cause tending to counteract any disposition which might exist towards a cure.

Another circumstance worthy of observation is the usually very low rate of increase of the tumour in such cases. This is in accordance with what should be expected when the resistance of the arterial tunics and the force of the current of blood are nearly equal in amount; and we might infer that they are so in this form of disease by simply witnessing the fact of this slow increase. But it might be supposed that as the tunics become thinner by expansion, their resistance would become less able effectively to oppose the force of the current of blood, and that consequently they would yield proportionably more rapidly as the tumour became larger. I believe the reverse to be the fact, arising from the force of the circulation upon the interior of the expanded part being diminished in a greater ratio than the resistance of the vessel, from well-known causes which in hydraulics influence the force of currents passing from small tubes into those of larger dimensions. It is not difficult to imagine that, in the progress of tubular aneurism, a status may at last be arrived at, in which no further increase of the tumour would take place; simply from the influence of the dilatation upon the force of the current at the part. Nor am I satisfied that, in the above case, such a status had not been attained; for it was remarked by the patient that he had not observed any increase of the swelling during the twelve months which he had cognizance of its existence.

The last and most important consideration is that relating to the means by which the cure in the above case was effected. It must be evident, however, that little positive information can be gained upon this subject, and we must consequently be content with mere surmise, or form our opinion from general considerations. It is the common practice in such cures, and in those which take place in the sacculated form of disease, to attribute them to the occurrence of coagulation of the blood within the artery or within the sac, which, by occlusion of the vessel or sac, prevents the ingress of fresh blood, and consequent increase of the disease. I am disposed to think that such explanation is unsatisfactory, both in reference to the case related and to aneurisms generally, when they undergo spontaneous cure.

The question is one of some moment, and perhaps may merit a few observations, particularly as it has a practical bearing. It is well known that, in examining the sac of an aneurism, it is not unusual to find both fluid and solid contents, the first being blood, the last being generally supposed to be blood in a coagulated state, but changed in its character. By attending to the last, it will be found (as pointed out by Mr. Wardrop in the Cyclopædia of Surgery), that it consists of two portions; the one coloured, the other nearly colourless. The coloured portion being undoubted coagulum, retains the common characteristics of that substance, and usually, but not always, occupies the central part of the sac. It is to the colourless, or what I have *called* the colourless portion, that I wish to direct attention, because it is on this that the curative process mainly depends. This portion mostly adheres to the interior of the sac, but the adhesions are easily separable; so that it is sometimes found partially or wholly separated, probably by causes exterior to the sac. It is formed in layers, and the laminated arrangement is easily seen when a section is made. These layers are sometimes but loosely connected with each other, and being imposed on each other, are necessarily concentric. The common explanation given of their formation is, that they are produced by successive deposit, from the blood flowing through the sac: thus Mr. Hodgson, in speaking of the spontaneous cure, says, "*the cavity of the sac* is gradually filled with layers of coagulum." Mr. Wardrop, however, has adduced some reasons for supposing that these layers are the result, not of coagulation, but of an action taking place in the parietes of the sac. The reasons which he adduces may perhaps fail of carrying conviction to the mind (a fate which may also attend the additional reasons which I shall presently adduce), yet they are sufficiently cogent

to deserve serious consideration. Those which he principally relies on, are the "great difference in the anatomical characters of a common clot of blood and a fibrinous concretion;" "the concreted fibrin having its interior surface smooth and polished;" and the "vascular connection," which he has every reason to believe exists between the fibrinous concretion and the sac. The additional reasons, which have convinced me that the common explanation of these formations is incorrect, are derived from the examination of the fibrinous layers themselves, and the occasional interposition of coloured coagulum between them, or between them and the sac. It is not in every case that these interpositions are found; but when found, their relations to the colourless laminae are most important, if not conclusive evidences for the elucidation of this subject.

If we adopt the common supposition that the whole solid contents of a sac are mere deposits from, or coagulations of, the blood, the explanation of the arrangements in the production of the colourless laminae with respect to these coloured masses is almost unintelligible; for we cannot explain how it happens that, if the whole mass be the result of one process of formation, parts of it, which lie close together, or are enclosed the one within the other, acquire different characters, such as these coloured and colourless contents possess. Under a real similarity in the process of formation, it seems most highly probable that they would present also a similarity of appearances, and that they would be either entirely coloured, or entirely colourless, but not with the coloured and uncoloured parts intermixed, as we sometimes find them.

I think, therefore, we must discard the opinion that the solid contents of an aneurism are the result of one process only of coagulation, as failing to afford a satisfactory explanation of the phenomena. All difficulty, however, vanishes if we assume two separate processes. There can be little doubt that the coloured contents are coagula of blood, as they retain appearances sufficiently characteristic for their recognition as such. It is in looking to the position which these occupy with respect to the uncoloured or fibrinous concretions by which they are surrounded, that we are led to a satisfactory explanation of the manner in which the latter are produced. When we look at these clots, we find them either entirely surrounded by colourless fibrinous concretion, and excluded thereby from the fluid blood passing through the sac, or lying between the fibrinous concretion and the sac itself,—in which latter situation they may or may not be excluded from contact with the fluid blood. When in the former of the two positions, we cannot account for their insulated situation, unless by supposing the clot to have been formed upon the surface of a fibrinous mass, and becoming subsequently enclosed by new deposits of fibrin, gradually augmented until the clot becomes central with regard to the whole mass. But in the latter situation blood may be insinuated between the fibrinous concretion and the sac, when, as before mentioned, they become separated by an accidental cause, in which case blood so insinuated will coagulate, and retain its characteristics.

Having determined these points, we have next to discover on which surface of the fibrinous concretion these minute clots are really formed. If it be on the interior, or that surface which is in contact with the circulating blood of the sac, it is then no doubt derived from that blood; and the fibrinous concretions, by which it eventually becomes enclosed, are equally derived from the same source. On the contrary, if it be on the exterior, or that surface in contact with the sac, the fibrinous concretions which subsequently inclose it are, with equal certainty, derived from the sac; since, by the formation of new adhesions after the clot has formed, the circulating blood becomes excluded, and no other source remains than the sac, from which any accretion of new matter can be derived.

I am disinclined to the former supposition, from my belief that had the clot been so formed, the subsequent deposits, by which it becomes enclosed, would be of the same character and colour as the clot itself; and a wholly different appearance from that which we actually find would result therefrom. On the other hand I adopt the latter supposition, not only as more in accordance with our general ideas of the reparative process, but also, and more particularly, from the observations I have had an opportunity of making upon the aneurismal contents. Thus a small coloured clot had formed between the sac of an aneurism and the fibrinous concretion contained within it, arising, I believe, from the passage of blood into a

space left by a slight separation of the two from each other. The further ingress of blood had been prevented by new adhesions, and the process of inclosure had commenced by the deposit of a thin layer of fibrinous matter upon its exterior surface, which matter adhered to the sac, and had no doubt been formed subsequently to the coloured clot. A similar enclosure had occurred to another clot in the same aneurism, but which, by the deposit of a greater number of fibrinous layers, had become more deeply buried within the fibrinous mass, and consequently more centrally with respect to the aneurismal tumour.

Taking the order of sequence of the deposits to be as I have stated, it follows that, the blood not having access to the exterior fibrinous layers, by reason of their adhesions to the sac, any increase which accrued to them could not have been derived from the blood, but must of necessity have been derived from the sac itself, with which alone they were immediately connected. Granting this mode of formation of the exterior layers, a proof of a strongly presumptive kind is established, that the whole of the fibrinous layers were formed in a similar manner, and that the whole were the result of successive formations, each pushing its predecessor forward upon the cavity of the sac, and being itself in turn pushed forward by its successor, and enclosing a portion of coloured coagulum which had fortuitously become congealed upon the surface.

This may, perhaps, be sufficient to show the general tendency of this argument to prove the sac itself, or more properly its vessels, to be the efficient agents in these fibrinous formations, although much else may be adduced both from examinations of the aneurismal contents, and the analogies of other diseases.

The space I have already occupied must be my excuse for not proceeding further upon this point. It must be evident, however, that if the fibrinous concretion be derived from the sac, and not from the blood, the order of increase must be different from that which is generally supposed. Instead of growing by deposits on its inner or central surface, the increase must take place from the exterior surface which lies in contact with the sac. The action itself by which the vessels deposit the fibrinous accretion is probably of the plastic kind, and bears a certain analogy to the adhesive processes in other parts. Such being the probable means by which nature attempts to cure in these diseases, we are enabled, by the knowledge of them, so to conduct our treatment as at least not to counteract her efforts. We may thus assign a reasonable ground for objecting to a practice which experience has already shown to be injurious, and can view the abstraction of blood not as a means of promoting coagulation of the blood, but as a means merely of diminishing the force of the circulation, and its consequent disturbing influence upon the sanatory plastic actions of the vessels of the sac. We therefore learn to avoid the enormous abstractions of blood formerly, and even sometimes at present so injuriously used, from a conviction that, although they diminish the disturbing influence of a perhaps too powerful circulation, they also to the same, if not to a far greater extent, diminish the reparative action of the vessels of the sac, from which alone any permanent benefit can reasonably be expected. Neither shall we have the same dread as formerly of the slight inflammations which occasionally arise in the sac, since by such inflammations the curative action is likely to be promoted. Thus, while we learn to direct our endeavours to diminish the disturbing influence arising from the force of the circulation, we at the same time learn to avoid weakening the powers of the system by the use of means which induce extreme inanition.—*Lond. Med. Gazette*, May 9, 1845.

60. *Calculi of the Nasal Fossæ*.—At the beginning of the present year, a patient, labouring under calculus of the nasal fossæ, was treated at the Hotel Dieu, by M. Blandin. M. DEMARQUAY, his house-surgeon, struck by the absence of all details on this disease in the classical writers on surgery, has been induced to make a series of researches, the result of which he has communicated in an interesting paper, contained in the June number of the *Archives Générales*.

Calculi of the nasal fossæ which Graaf calls rhinolithes, appear to have been first mentioned in 1502, by Jos. Mathias de Gardi. Cases of this disease have subsequently been given by Thomas Bartholin, 1654; Clauðer, 1685; Kern, 1700; Vitus Reidlinus, 1706; Wepfer, 1727; Ruysch, 1733; Plater, 1736; Horn, 1788; Saviales, 1814; Graaf, 1828; Mr. Thouret, 1829; and Sir B. Brodie, (*Lancet*, July

6th,) 1844. The cases quoted by these authors, M. Demarquay gives at length, and finds on them the following description of the disease:—

Nasal calculi may exist alone, or in variable numbers. They may develop themselves on either side, and in the inferior or the superior regions of the nasal fossæ. It is, however, more especially in the inferior meatus that they appear to originate. They may be found in the frontal sinuses, or even in the maxillary sinus, and thence pass into the nasal fossæ. They may completely obstruct the cavities of the nose, incline the septum to one side, or even destroy it. Their volume varies from that of a pea to that of a pigeon's egg; their colour is black, gray, or white; their surface is uneven; and their centre is often constituted by a foreign body, or by the root of an incisor tooth. They are formed of the elements which are found in the secretions of the nasal fossæ, and in the tears—viz., mucus, phosphate of lime, and the carbonates of lime and magnesia.

The causes which give rise to nasal calculi are obscure. Graaf attributes them to gout, but his own case is the only one in which the gouty diathesis existed. Chronic inflammation of the nasal fossæ, and of the lachrymal gland, appear the most probable causes of this affection. In many cases, the calculus appears to have formed round a foreign body—a cherry-stone, for instance, the root of a tooth, or some other substance. The presence of one or more calculi in the nasal fossæ occasions so little annoyance in some as to be scarcely perceived, whilst in other cases the symptoms may be sufficiently severe to necessitate surgical interference. The most frequent symptoms are, a certain degree of dryness in the affected nostril, accompanied by a sensation of obtusion and weight, and by difficulty of respiration. Sometimes there is acute pain in the nose or forehead, of either a constant or an intermitting nature. The inflammation of the surrounding parts may become severe, and give rise to an abundant fetid suppuration. The nose may become externally deformed. The eye may participate in the inflammation, or be bathed in tears, as in *fistula lachrymalis*. This is more especially the case when the calculi form in the inferior meatus. On dilating the nostrils, the foreign body is sometimes at once perceived; in other cases it is too deeply situated to be recognized. When this occurs, a metallic sound, or the polypus forceps, should be introduced. The characteristic sound produced by their striking against the calculus will at once show what is the disease. If situated in the frontal sinuses, or very high in the nasal fossæ, they may not be recognizable by either of these modes of exploration. Calculi thus developed in the nose have often remained very long without being recognized. Sometimes they have been expelled in a fit of coughing, or sneezing, but they have generally been extracted by the hand of the surgeon. Nasal calculus has given rise to numerous errors of diagnosis, the symptoms which it produces having been attributed to *ozaena*, to disease of the bones of the nose, &c. Generally speaking, however, it is not difficult for a surgeon, who is aware of the existence of such a disease, to recognize its presence.

The first indication to fulfil in the treatment is the extraction of the calculus, an operation which it is not always easy to accomplish. The extraction may generally be effected with a pair of polypus forceps. It must, however, be done with care, owing to the inequality of surface which the calculi present. When the calculi have been removed, the surgeon must, by an appropriate treatment, combat the inflammatory symptoms to which they have given rise. Emollient and astringent injections are often very useful. If it is supposed that the presence of the calculi is connected with any general diathesis, it must be treated by appropriate remedies.—*Lancet*, 26 July, 1845, from *Gazette des Hôpitaux*.

61. Remarkable case of accidental Amputation of the Arm.—A baker's boy, a youth of about twenty years of age, was engaged in raising some sacks of corn by a windlass. For the sake of a frolic he seized hold of the chain, wishing to be raised to the upper part of the granary; but he was drawn so high, that his head came against that portion of the roof through which the chain passed. Not being able to hold by the chain, he fell with his arms stretched out. In falling, his left arm came in contact with the top of a door below, which was standing open; and the force was such, that the arm, which was bare, was completely separated, at about a hand's breadth, from the shoulder-joint. His body fell on one side of the door,

and his arm on the other. Under this extraordinary amputation the arm appeared as if it had been chopped off by an axe; the bone and muscles were as evenly separated as if they had been divided by a blunt knife, and the end of the bone was not at all splintered, a few nervous filaments only hanging from the wound. The fall of the patient must have been broken by his arm coming thus in contact with the edge of the door; for the only injuries to his person were a few contusions and abrasions about the skin of the face. He was, however, at first speechless and insensible, but he recovered his speech and consciousness in a few days. The wound bled but little; it was dressed, and the brachial artery was tied, to guard against accidental hemorrhage: the nervous filaments were cut off, but neither the muscles nor the bone required the use of a knife or a saw. Fever with delirium followed. A strict antiphlogistic regimen was adopted, and ice was applied to the head. This treatment was attended with benefit. The wound of the arm, which was at first discoloured, assumed a good appearance; healthy suppuration came on, and the patient, after about two months, was perfectly restored. The stump cicatrized well, and the bone was completely covered with skin.—*Lond. Med. Gaz.*, July 1845, from *Caspar's Wochenschrift*, April, 1845.

62. *Case of Excision of the upper end of the Femur in an example of Morbus Coxarius.* By Wm. FERGUSSON, Esq., Prof. Surg. in King's College.—John Clark, aet. 14, suffered for fifteen months from hip disease, and in February, 1845, was in the last stage of hectic. The head of the femur was displaced on the dorsum ilii, and could be felt by the finger passed into a large sinus connected with the disease. The limb on the affected side was between four and five inches shorter than the other, and much distorted by flexion at the knee and hip. There was no indication of disease of the bones of the pelvis, and the head of the femur seemed the principal cause of suffering.

On the 1st of March, 1845, the author made a longitudinal incision on the hip over the head and neck of the bone, and those parts, with a portion of the shaft, including the trochanters, were removed, the bone being cut across with a common saw. The patient bore the operation well; the previous bad symptoms soon disappeared, and in two months he was able to move about the wards of the hospital on crutches, the wound being nearly closed.

The paper concludes with a short historical sketch of the operation, whereby it is shown that this is the second instance in which it has been successfully performed in this country, having been first proposed by Mr. Charles White, of Manchester, in 1770, and first performed by Mr. Anthony White, of the Westminster Hospital, in 1818.—*Proceedings of R. Med. Chirurg. Society* in *Lond. Med. Gaz.*, July 18th, 1845.

OPHTHALMOLOGY.

63. *On a possible explanation of the adaptation of the Eye to distinct vision at different distances.* By PROF. FORBES. (Read 16 Dec., 1844.)—The idea suggested in this paper occurred to the author three years ago, from reflecting that the destruction of the spherical aberration in the eye might be affected by a modification of the curvature of the lens, as well as by the variable density which it is known to possess, and which has usually been accounted for as intended for that purpose.

The author considering the probability to be almost infinite against the sphericity of the surfaces (a necessary evil in our instruments, but inexplicable in a natural organ), a conviction which he afterwards found to be reduced to certainty by experiments which have actually been made on the figure of the lens—he conceived that the variable density of this part of the eye must have some other cause. He considered it likely that it might contribute to the focal adjustment of the eye in the following way:—The lens is composed of coats more firm and tenacious, as well as more refractive towards the centre, and less at the sides. These coats are also nearly spherical in the centre, forming a nucleus of considerable resistance. Hence the author supposes, that if the lens be compressed in any manner by a uniform hydrostatic pressure, it will yield more readily in a

plane at right angles to the axis of vision, and hence the lens will become more spheroidal, and consequently, more refractive; that is, adapted for the vision of objects at small distances. The hydrostatic pressure in question, is believed to be conveyed from the humours of the eye, between which the lens is delicately suspended, and to originate in the compressing action of the muscles which move the eyeball acting simultaneously on the tough sclerotic coat.

The author thus sums up the evidence which he thinks gives probability to this explanation.

1. The form of the surface of the lens might have been such as to correct aberration without any variety of density whatever. But, on the contrary, it has a form which exaggerates the ordinary spherical aberration. A form which, therefore appears to be adapted to the rapid variation of density in the lens, which must therefore be presumed to have some distinct mechanical utility.

2. The effort to view near objects is accompanied in most, if not all persons, by a sensible muscular effort.

3. This theory is free from the various conclusive objections urged by Dr. Young against all explanations which do not turn upon a change of figure of the lens; and is also free from the difficulties to the admission of Dr. Young's theory—the muscularity of the lens itself.

4. When the lens is reproduced, after the operation for cataract, the power of adjustment is greatly diminished or wholly lost, since the variable elasticity will be wanting.

5. The diminution of the adjusting power of the eye in old age, is explained by the increased rigidity of the lens and consequent incompressibility.

6. The crystalline lens polarizes light in a manner similar to that exerted by glass and other uncrystallized substances, in a state of constraint, that is possessing unequal elasticity in different directions.—*Proceedings of the Royal Society of Edinburgh*, No. 25.

64. *Amaurosis—Fungoid Tumour at the base of the Cerebellum.*—The following interesting example of this is recorded by Mr. H. TAYLOR in the *Lancet*, (Aug. 23, 1845.)

Mr. T—, a married man, of good conformation, nervous temperament, and fair complexion, having large prominent eyes, with blue irides, appears to have been subject to severe headaches from an early age, but otherwise enjoyed good health, until eight or nine years ago, when he became affected with dyspepsia, which was attributable to a habit of eating his meals hurriedly, and without any regard to wholesome diet, at the same time he was sedulously engaged in business. He was then troubled with flatulence, noises in the head, and total deafness in the left ear.

In the beginning of 1840, being then forty years of age, he found his eyesight fail, with frequent lachrymation and muscae volitantes. There was then no obvious change in the pupil, and the conjunctiva was merely in a relaxed state. As the gastric disturbance was also much increased, the failure of sight was referred to this, and by the prescription of Mr. Ware he was bled, took Plummer's pill, and used astringent collyria, with but little benefit. In July of the same year he had an attack of articular rheumatism, and from this time became subject to increased action of the heart.

In January, 1841, he consulted Mr. Tyrrell, who pronounced him to be amaurotic, and considering the case, from the first, as of cerebral origin, but not despairing of a recovery, he put him upon a strict regimen, and prescribed an alternative course of mercurials and sarza, with occasional purgatives. Contra-irritation was kept up by blisters on the forehead and behind the ears. Ointments of iodine and of veratrum were successively tried: our patient was also cupped occasionally over the occiput and nape of the neck, and a seton was kept introduced in the latter situation for many months.

This plan of treatment was rigorously pursued for two years without any good result. His sight had now become so bad, that he could not walk out unassisted. The pupils were much dilated, though still obedient to a strong light, and the globes appeared more prominent and firmer than natural. His headache recurred with greater severity, chiefly affecting the left side of the occiput.

In January, 1842, he was attacked with neuralgic pains, commencing in the left sciatic notch, and extending, in the course of the sciatic nerve, to the outer side of the knee, and down the leg as far as the ankle. The pain, which was agonizing, occurred in paroxysms, and seemed to increase by exercise of the limb, and to subside altogether at night, or on his assuming the recumbent posture.

No very marked relief was obtained from blistering in the course of the nerve, nor from the endermic use of morphia and opiate frictions; neither was the internal exhibition of narcotics any more successful, and the pains only wore off as his increasing debility obliged him to keep his bed. Mr. Tyrrell saw him occasionally at this period, and gave as his opinion that the neuralgia, as well as the amaurosis, were dependent on a tumour at the base of the cranium; and with this impression of the case, all acute treatment was relinquished, and only such medicines were given as the state of the digestive organs might require. There was now very great impairment of muscular power generally, but no paralysis nor loss of common sensibility. The left leg wasted visibly, at the same time that he was becoming generally emaciated. His appetite, however, continued good, and latterly it was found difficult to satisfy his wants; the bowels were so torpid as to require the almost daily administration of purgatives.

In November, 1842, he had several attacks of delirium, with excitement, like that of drunkenness, which were followed by stupor; these afterwards assumed much of the character of epilepsy, there being clonic convulsions, usually in the night, and occurring at intervals of a month.

From this time he remained in bed from sheer exhaustion, and sank into a state of apathy, with apparent moroseness of temper; he expressed himself well in conversation, but with much slowness, as if a great effort were necessary to collect his ideas; and when roused he seemed to have the full use of his mental faculties. The senses of taste and smell were not at all impaired; his hearing on the right side was very good, but vision was now completely extinguished, so that there was no perception of light left. There does not seem to have been any excitement of the sexual appetite, and all that could be elicited from the nurse on this point was, that he had lost all sense of decency. He lingered on in this state during sixteen months more: at the conclusion his urine and feces were passed unconsciously; and during the oppressive weather of August, 1844, his appetite failing him, in a few days he expired.

An examination of the body was made sixteen hours after death. The bones of the skull were thin, and the diploe scarcely visible. The dura mater was healthy, and not unusually adherent. The vessels of the pia mater were much congested, and serum was effused extensively into the cellular tissue between the convolutions. The brain was extremely firm, and on dissection presented a great number of large bloody points. The lateral ventricles were distended with clear serum, of which four or five ounces were collected. The septum lucidum was broken down; the choroid plexuses were shrunk and pale, and had several small serous cysts formed on them. On removing the brain, the optic nerves were observed to be very small, and of firm consistence; on cutting away the attachments of the tentorium, a bulging of it was seen on the left side, and when this was punctured, about half an ounce of gelatinous fluid, of a greenish colour, escaped. The cerebellum was now raised up, and under its left hemisphere a tumour was discovered, lying on the petrous portion of the temporal bone, and firmly attached to the auditory foramen. There were also extensive connections between it and the cerebellum, which was hollowed out to receive it. In attempting to dissect it out, so as to preserve its relations to the cerebellum, the morbid growth was found to have extended some way into the auditory canal, which was widened considerably, and the surrounding bone appeared to be eroded. The tumour, when removed, was an oval mass, compressed from above downwards, and having the following measurements:—Length, two inches, greatest width, one inch and a third, and vertically, one inch. Its surface was lobulated, and studded with small serous cysts, the colour of a darker tint than the brain, owing to the greater vascularity of its coverings; these consisted of the arachnoid membrane and a thin cellular layer, which were continuous with the investments of the cerebellum, forming the only bond of union between them. Situated in the angle between the lateral mass of the cerebellum and its large peduncle, it pressed

also on the pons varolii. The seventh nerve, and the divisions of the eighth, passed under it to their respective foramina, without being at all flattened or displaced.

A section of the tumour showed a dense structure of glandular firmness, made up of whitish arborescent fibres, leaving numerous interstices, which contained some gelatinous serum. The striae of white tissue were speckled here and there with black points, which proved to be coagulated blood, and sections of minute vessels. One half was shown to Dr. Walshe, who considered it to be a variety of encephaloïd cancer, and rare, as occurring in the membranes, and not in the substance of the cerebellum.

In the thorax, the heart was found much enlarged, from dilated hypertrophy of the left ventricle. There were several patches of cartilaginous deposit at the bases of the mitral valves, and the aorta was somewhat dilated at its commencement, but healthy in its valves and lining membrane.

Old adhesions existed between the ribs and middle and lower lobes of the left lung; the latter organ was much congested, and the bronchiaæ filled with frothy mucus.

In the abdomen, there was nothing worthy of notice besides the kidneys, which were in an advanced stage of granular degeneration.

65. *Congenital Opacity of the Cornea.*—Dr. P. W. MACLAGAN relates (*London & Edinburgh Monthly Journ. of Med. Sci.*, July, 1845) a case in which the eyes fourteen hours after birth presented the following appearance:—

"On neither was there the slightest trace of vascularity or purulent discharge; the left cornea was completely opaque; the right was in the same condition, on its inferior two-thirds, but the upper third was clear, the opacity terminating by a tolerably defined edge. At first, I thought that I could perceive this edge to change its position, as the child's head was inclined to one side or the other, which led me to suppose the opacity resided in the aqueous humour; but this I found to be a mistake. Never having seen such a case, and not being able to hear of one, I was led to form an unfavourable prognosis; but in this I was agreeably disappointed; for in a few weeks the edge of the opacity on the right cornea began to thin off, to become less defined, and at length to recede, so that a part of the pupil could be seen on looking straight at the eye, whilst at first it could only be observed by looking from above. It was long before any change could be perceived on the left eye; but about the beginning of January, *i. e.*, three months after birth, it too began to improve—the opacity at the upper part of the cornea becoming more diluted-looking, and by degrees disappearing. At this time it was curious to observe the infant instinctively depressing the eyeball, when any bright object was held before it, so as to permit its image to fall through the upper portions of the cornea.

When I was removed from that post, a few days ago, the improvement was gradually progressing. There is now only a small portion of the right cornea opaque, and the upper half of the left is tolerably clear.

MIDWIFERY.

66. *Simple Ulcers of the Neck of the Uterus.* By Dr. ROGNETTA.—Boyer denied the existence of simple ulcers of the os uteri, doubtless, in consequence of the little use made of the speculum in his time. Nevertheless, there is no more frequent disease, and it may be asserted that every woman who has leucorrhœa, lactescent or purulent, is affected with it, if they have not cancer. Five or six varieties of this affection are at this time under treatment in the wards of M. Jobert, Hôpital St. Louis, where we have had an opportunity of leisurely studying them by means of the speculum. It is so rare in private practice to have an equal number of patients under observation at one time, and so inconvenient, moreover, to examine them in a suitable manner, that the present opportunity of doing so is interesting. The disease, as far as regards the ulceration, presents itself under various forms;

but they all proceed from the same cause, hypertrophy of the neck. This hypertrophy, without doubt, precedes the erosion, and is sometimes accompanied with induration, sometimes with softening. The hypertrophic softening is sometimes considerable; we have seen the neck undulate, and even yield under the simple pressure of a pencil of agaric, like a stewed apple. In this condition the neck, from the absence of nerves in its tissue, presents no morbid sensibility. The ulceration appears, no doubt, consecutively to this state, and is the natural process of chronic inflammation. The ulcers may have their seat on one or other lip, generally the superior, sometimes on both, and very frequently on one or other side; in some cases they cover the whole circle of the os, and in others they have their seat deep in the neck of the uterus, where they are concealed by the swelling of the anterior lip; but they may be discovered there by a means which we shall presently indicate: so much for the seat of the ulcers. As to their form, they are sometimes superficial,—simple aphthæ,—of the size of a lentil, having their seat in the edge of the neck, and more or less numerous; this is the most simple case; these aphthæ, however, sometimes extend, become confounded together, and constitute a superficial erosion of more or less extent of a mapped form, and more or less irregular: the lesion then becomes much more serious. It is not necessary, however, that it should pass through the aphthous stage to arrive at this state, for it may originate primarily and to a great extent, from the inflammatory process alone. This species of ulceration presents a great resemblance to those large erosions of the superior part of the cornea, in form of a cross, described by Demours, and styled by Velpau "ulcères à coup d'ongle;" it is, however, proportionally much larger. It may be compared more exactly to the surface of a suppurating blister; it is sometimes covered with granulations, bleeds easily, and is often even infiltrated with blood; thus its aspect is always red; it is not painful to the touch, either with the finger or a pencil. It is probable that these women, in whom there is hemorrhage after sexual intercourse, have some slight ulcerative lesion of this kind. In a third variety, the erosion is no longer a mere superficial excoriation; it is hollow, infundibuliform, semi-spherical, more or less deep, sometimes very deep. Its base is more or less foul; its surface is always of a bright red, and infiltrated with blood. The erosion then very much resembles certain hollow ulcers of the legs in varicose subjects, who have just been walking. This kind of ulcer often causes a notch on one side of the os uteri, near its opening, or on its free edge, but more generally on its superior lip, or towards the left lateral commissure. In some cases it affects the whole circle of the internal surface of the os, and hollows out a progressive cavity from above downwards. These hollow erosions must always be regarded with suspicion, more especially if they make any progress in depth, for their nature is frequently not simple; and if they have been so, they are liable to assume a bad character. It may be said, generally, that the ulcer is simple when its surface is granular. In regard to the third variety, it resembles the two preceding as to form, only it has its seat in the neck. In conclusion, we have thus observed three varieties of simple ulcers on the neck of the uterus; the aphthous, ulcerative abrasions, and hollow ulcers; they are all hemorrhagic, especially the latter, and are more or less granular. Hollow ulcers, not granular, are always to be regarded with suspicion. We have not included syphilitic sores of the neck, primary or secondary; these lesions do not in general exist alone, and they have, moreover, specific characters, which at present we need not mention.

Those affected with ulceration of the neck of the uterus are generally young, having seldom passed their thirtieth year; have usually had children, or miscarriages, and have been for some time subject to abundant leucorrhœa, and hemorrhages, or at least to fluxes of blood from the uterus other than the catamenial. Their constitution is often lymphatic, but this has not appeared to us very predominant. They are frequently dark women, with large black eyes, robust, ardent, in whom the pileous system is much developed, indicating a great degree of vigour in the vitality of the dermic covering. These conditions may perhaps be regarded as predisposing causes of the hypertrophy, and the consequent ulcerations, owing to the congestive state of the skin, the mucous linings, and the neighbouring organs associated with it; these, however, are mere conjectures.

The patients affected with this disease present two kinds of symptoms. On the

one hand, an abundant leucorrhœa, with a lactescent discharge; on the other, symptomatic phenomena peculiar to most of the chronic affections of the uterus; viz., lassitude of the extremities, pain and dragging in the loins, hips, and thighs, want of appetite, and sometimes a painful spasmodic contraction of the sphincter ani. These symptoms are accompanied with general languor, more or less troublesome.

A precise diagnosis can only be obtained by means of an accurate examination with the speculum. The "toucher" alone is insufficient; a state of hypertrophy merely can be ascertained by its means, but even then its degree can never be perfectly and clearly defined, however expert the examiner may be. In order to institute a thorough examination with the speculum, the patient must be placed, not on the edge of the bed, as is usually done, but on a table, with the hips very much raised, and the thighs bent backwards, so that the knees almost touch the abdomen. It is then only that the neck can be distinctly seen by means of a strong ray of natural light which falls obliquely on the fundus of the vagina from above downwards. Artificial light does not answer. In order to examine the whole periphery of the neck, a double-valved speculum ought to be used, which on opening embraces it entirely. A single cylindrical speculum is not so serviceable for the first examination, as its opening does not include the whole hypertrophied mass. At first there is observed on the neck and fundus of the vagina, a quantity of purulent mucus; on wiping it away by means of an agaric pencil, the disease is then visible. The first thing that strikes the eye is hypertrophy of one or other lip, or of the whole of the os, and then the ulcerations with which it is complicated. When there is hypertrophy, with pus in the opening of the neck, ulceration, which is not visible, may be suspected. The following is the method which M. Jobert employs to discover this:—He withdraws the double speculum, and introduces the cylindrical one in one piece, and manœuvres it in such a way as to engage the os tineæ in the centre of its opening; he then inclines the handle of the instrument obliquely to the right or left, or from above downwards, in such a way as to cause the posterior opening of the speculum to slide in the opposite manner on the neck; he thus places one of the lips of the os on the edge of the opening of the speculum, and then pushes the instrument from above downwards, so as to separate the lips, which, from the softness of the tissues, is easily accomplished; a considerable portion of the neck then becomes visible, and the ulcerations are brought into view. These ulcers are generally very small, (like a lentil,) but, so far as they extend, are as readily seen as the others. When they are simple, their tendency is to progress from the interior outwards, rather than in the opposite way.

As to the *treatment*, nothing is more simple or certain. The disease is invariably cured in the course of a few months, by the means employed at St. Louis. Two lesions have to be considered, the one dependent on the other, viz., ulceration and hypertrophy. If there are merely aphthous ulcerations, slight cauterization with the acid nitrate of mercury, or even with the nitrate of silver, speedily produces cicatrization; the remaining hypertrophy, if it is not considerable, may be cured by the ordinary means. If it be to a great degree, the actual cautery is used for both lesions from the commencement. The latter treatment is also employed when the hypertrophy of the neck, though not considerable, is obstinate, and the leucorrhœa continues. The actual cautery is used for the other species of ulcers either by reverberation, or, which is more general, by its direct application to the ulcer, so as to produce an eschar more or less deep; it may be repeated in the course of eight or fifteen days. The cure is generally accomplished in the course of two, three, or four months; there is melioration in regard to the pain and leucorrhœa during the first week. It seems probable, that concentrated heat causes such a modification in the diseased tissues, as to dispose to a healing process. We earnestly entreat attention to the above facts: the disease is very frequent and disastrous among all classes, and more especially in large towns.—*Annales de Thérapeutique*, April, 1845.

67. *Epidemic Puerperal Metritis in the Paris Hospitals*.—In a late No. of this Journal (Jan., 1845, p. 222), we noticed the extensive prevalence of erysipelas in all the Paris Hospitals; and it is therefore without surprise that we now learn that puerperal metritis of a very fatal character reigned in the Paris Hospitals about the same period. There is an interesting account of this epidemic in the *Gazette*

Médicale de Paris for August last, by MM. BIDAULT and ARNOULT, internes. Our file of that journal not extending to so recent a date, we give the following abstract of this paper from a recent number of the *Lancet*. The opportunities for observation of MM. Bidault and Arnoult, extended over three hospitals, those of Saint Louis, the Hôtel Dieu, and the Hôtel Dieu Annexe, in each of which there is a small ward devoted to midwifery. Epidemics of puerperal fever have been common of late years in Paris, in the midwifery establishments, especially at the Maternité, the large obstetric hospital, at which it reigned with great violence at the time that it was observed by MM. Bidault and Arnoult. At the Hôtel Dieu, the epidemic reigned in January, February, and March, 1843. There were eleven deaths in forty-five deliveries, in the three months, whereas there had not been one death in the hundred and forty deliveries which had occurred during the previous nine months of the preceding year; at the Hôtel Dieu Annexe, out of sixty-seven women delivered, sixteen were attacked, and fourteen died. The epidemic occurred in the months of November and December of the same year, (1843.) The patients had been drafted from the Maternité, on account of the existence in that hospital of a very fatal epidemic. The Saint Louis epidemic took place in the months of September, October, and November, 1844. Some isolated cases had occurred in the year, but it was only during the period mentioned, that the fever assumed the epidemic form. Out of forty-four deliveries, there were nine deaths.

Generally speaking, the morbid symptoms manifested themselves at the period of the milk fever, from the second to the third day. In one case, they appeared a few hours only after delivery; in some few, only four or five days after. Nearly always the attack commenced by rigors, of greater or less duration, followed by febrile reaction. In some instances, the rigors were absent, febrile heat of skin, frequency of pulse, restlessness, and abdominal pain, opening the scene. The pulse always became very frequent, its pulsations rising to 110 or 120, and its strength depending on the freedom of the general reaction after the rigors. At the same time, there were cephalgia, redness, and injection of the face, brilliancy of the eyes, anorexia, frequent and laborious breathing, a loaded state of the tongue, which rapidly became dry, bilious vomiting, diarrhoea, or constipation. At Saint Louis, obstinate constipation was present in every case, and no intestinal lesions were found after death. At the Hôtel Dieu, diarrhoea was, on the contrary, equally universal, and the follicles of Brunner were constantly found hypertrophied. There was generally abdominal pain from the commencement; sometimes the pain was slight, sometimes very severe. The uterus remained voluminous, and there was more or less abdominal tympanitis, especially when the affection assumed at an early period the typhoid character. The lochial discharge was nearly always diminished, but seldom entirely suspended. The breasts became flaccid if the milk had previously appeared, if not, it was not secreted. The urinary secretion was diminished, and the excretion was sometimes difficult. Indeed, in some cases, the bladder had to be emptied occasionally by means of the catheter.

The second period of the disease was characterized by symptoms of still greater gravity. All reaction ceased. The face became deeply altered, the eyes were sunk in the orbits, and surrounded by a black circle, the lips livid, the nostrils dry, and filled with particles of dust. Extreme prostration of strength accompanied these symptoms, along with great anxiety of countenance. The abdominal pains disappeared, the tympanitis, at the same time, increasing considerably. The respiration was difficult and laborious, as many as forty-five or fifty inspirations being made in a minute; pulse 140 or 150, small, irregular, compressible; alvine evacuations, involuntary; fluids rejected by ingurgitation; tongue dry, and covered with a dark fur; breath fetid; extremities cyanosed. Death generally followed on the fifth or sixth day of the attack, the patients retaining their intellectual faculties to the last.

In some few cases there was an apparent remission, which, however, lasted, generally speaking, for a short time only. In the course of a few hours, the disease resumed its fatal progression. With the small number of patients who recovered, the symptoms continued gradually to improve. The respiration became easier, the pulse fuller and slower, the thirst less intense, &c. The convalescence was tedious, and necessitated several months' residence in the hospital. In some

patients at the Hôtel Dieu Annexe, and with all at St. Louis, there was an intense bronchial catarrh.

The body of the uterus was always found more voluminous than it ought naturally to have been at the period of death. Its cavity contained gray, sanguous, fetid, false membranes; on washing them away, the surface which they covered was, however, found white, and apparently healthy. The implantation of the placenta was marked by small coagula. The tissue of the uterus was firm and healthy. There was none of the gangrene or putrescence (*putrescentia uteri*) which has been described by German writers. There were not, either, any abscesses. The peritoneum covering the uterus was often inflamed, and covered with false membranes. No uterine veins were ever found diseased, but the uterine lymphatics were inflamed and filled with pus, in a great proportion of the cases. At the Hôtel Dieu Annexe, the inflammation did not extend beyond the lymphatics of the uterus. At the Hôtel Dieu, in some cases, and at Saint Louis in all, a great number of inflamed lymphatics, filled with pus, were found in the lateral ligaments, and on the surface of the ovaries. These inflamed lymphatics terminated in the pelvic ganglions, which were sometimes themselves softened and filled with pus; the efferent vessels, however, were never found diseased. The lateral ligaments were covered with false membranes; the ovaries, also, were enlarged, and infiltrated with pus; the Graafian vesicles on being incised were often found filled with pus. At the Hôtel Dieu, and at the Hôtel Dieu Annexe, where the symptoms of peritoneal inflammation were more marked from the onset than at Saint Louis, the peritoneum was also found more extensively inflamed. The peritoneal cavity contained a considerable quantity of purulent serosity, in which floated detached false membranes, and the intestinal folds and lateral ligaments were united by false membranes. In some cases, there was a subserous injection on the intestinal folds. At Saint Louis, where the typhoid symptoms predominated, the peritoneum merely contained a white lactescent effusion, without false membranes, or adhesion of the intestines. The peritoneum was pale, without any inflammatory injection. In these cases, there were purulent infiltration of the subperitoneal cellular tissue of the pelvis, and suppuration of the lymphatics of the lumbar region. The stomach contained an enormous quantity of a greenish fluid, but presented neither inflammation nor softening. The follicles of Brunner, to the alteration of which, in puerperal fever, much attention has been paid of late, were only found diseased at the Hôtel Dieu. They presented the appearance of a papular or pustular eruption, with a white apex. Whenever they were met with, diarrhoea had existed. At Saint Louis, where the intestinal mucous membrane always appeared healthy, there was no diarrhoea, but, on the contrary, obstinate constipation. The liver was never diseased. The spleen was sometimes larger and softer than usual, but not otherwise affected. The parenchyma of the lungs was generally healthy; hypostatic engorgement was sometimes met with, and appeared to be similar to that of typhus fever. There were no partial pneumonias or metastatic abscesses. At Saint Louis, the small bronchi were obstructed by mucus in some cases. At the Hôtel Dieu Annexe, pleuritic effusions, single or double, were common. No lesions were met with in the heart or pericardium. In a few instances in which delirium had been present, the membranes of the brain were found slightly injected, as also the surface of some few cerebral convolutions; otherwise, there were no lesions of the nervous system.

These epidemics manifested themselves, as is usually the case, without any appreciable cause. It may be remarked, however, that they all three occurred during the cold months of the year. It would appear, that it is generally during the cold season that epidemics of puerperal fever manifest themselves in Paris. The fever cannot have been occasioned by unusual crowding of the patients, as, at Saint Louis, the number delivered was smaller than usual, and, at the Hôtel Dieu, not greater. A circumstance worth noticing is, that of sixty-seven women delivered in the special midwifery ward at the Hôtel Dieu Annexe, fourteen died; whereas, out of twenty-one women dispersed in the medical wards, and therein delivered, during the same interval of time, only one died. It must, however, be mentioned, that the sixty-seven females alluded to had been drafted from the Maternité, where puerperal fever existed, and where they had resided for some time. They may, therefore, have brought with them a kind of predisposition. Various

circumstances occurred during the epidemic which seem to favour the idea of contagion. Thus, at Saint Louis, for some time, all the women placed in two small rooms were attacked. A woman operated on for uterine polypus, and placed in one of the midwifery rooms, was seized two days after the operation with the same symptoms as the other women, and died. On examination, the only lesion found was the lactescent effusion into the peritoneum. The uterus, as also the veins and lymphatics, were perfectly healthy. Ancient authors—Van Swieten, for instance—consider non-lactation as a predisposing cause. Most of the women attacked during these epidemics were not suckling.

The principal means of treatment resorted to, were bleeding, general and local, mercury, administered internally and externally, the essential oil of turpentine, ipecacuanha, and the tincture of aconitum. General bleeding, which was tried when the reaction was energetic, the pulse full and resisting, was not attended with beneficial results. The pulse soon fell, and extreme prostration followed. Local bleeding, by leeches applied to the parietes of the abdomen, always gave relief, but the amelioration was only momentary, the pains soon returning. Calomel was administered internally, twenty or thirty grains being given in six doses in the course of the day. It nearly always acted on the bowels, but did not occasion salivation. As, however, it was seldom possible to continue its use more than two or three days, owing to the short duration of the disease, this is not surprising. At the same time, mercurial ointment was rubbed into the thigh in some cases. In two instances, two pounds were rubbed in within the twenty-four hours without preventing a fatal termination. Turpentine was given to three patients without success. Ipecacuanha, which was administered, apparently with great success, by Douchet, in an epidemic of puerperal fever at the Hôtel Dieu at the end of the last century, was also resorted to in the first stage. It appeared, in some few cases, to produce slight amelioration for a few hours, but the disease soon resumed its former intensity. In the only two cases that were saved at the Hôtel Dieu Annexe, the treatment consisted, at the onset, in antiphlogistic measures, and, subsequently, in the use of mercury, internally and externally, and in the administration of the tincture of aconitum; at first, one drachm, and afterwards two, in a four-ounce mixture during the twenty-four hours.

68. Dimensions and Forms of the Neck and Mouth of the Uterus. By Dr. J. BOYS DE LOURY, Principal Surgeon of St. Lazare, and Dr. H. COSTILHES, former Interne at St. Louis and St. Lazare. It is extremely difficult to determine what we ought to consider as the proper dimensions of the neck and mouth of the uterus. It is generally believed, that in women who have had children, the cervix is much more bulky, and that the orifice is much more gaping. Our experience has shown us, that this rule is far from being without exceptions. We have seen women who were the mothers of several children, with the *os* small, uneven and the *cervix* of no greater bulk than is common in those who have never been impregnated. With respect, also, to age, there exists a difference in the dimensions of the neck: for, as exceptional cases, we meet with women in the decline of life, who have it larger than in youth. It appears, then, that it is by no means easy to lay down the dimensions of the uterus, with reference to its physiological state; and we are quite certain, that physicians sometimes consider that to be an engorgement which is only a healthy condition; and at other times, regard the neck of the uterus as being in a normal state, when, in reality, it is engorged.

The smallest cervix which we have seen had, at the base, for its greatest or transverse diameter, $1\frac{1}{2}$ centimetre, and for its antero-posterior diameter, 1 centimetre. The cervix of greatest size, free from engorgement, is always at least 3 centimetres in breadth, with an antero-posterior diameter of 2 centimetres. This difference between these diameters gives an *oval* form to the neck; so we hold, that when the antero-posterior diameter is augmented, there exists engorgement. For example, if the transverse diameter be 2 centimetres, and the antero-posterior diameter have the same dimensions, we conclude that the neck is engorged; and if, in such a case, the *os tincæ* be examined, it will be found that it is not in the centre, from one of the lips being more swollen than the other. In engorgements following abortions, we have found the transverse diameter of the cervix so great as from 4 to 5 centimetres. In the healthy state, the neck usually presents the form of the segment of an ovoid, and sometimes, though rarely, a conical shape:

in the latter case, it projects very much into the vagina. This conical and salient condition of the cervix is very often met with in barren women. Contrasting with this class of cases, are some in which the neck is almost absent, and the *os tincæ* feels as if it were a continuation of the vagina, giving rise, in some instances, to the belief, that either the anterior or the posterior lip is wanting.

It may be stated, with reference to the size of the mouth of the womb in *women who have had neither abortions nor children*, that its transverse diameter never exceeds 5 or 6 millimetres, when it is, as usual, linear. If the *os* be rounded, the transverse diameter seems to be so much diminished. In a very few rare cases, the diameter of the mouth is not more than 1 millimetre.

In *women who have borne children*, the diameter of the mouth of the womb always becomes enlarged transversely, but often not to any very great extent. Its margin is almost invariably fringed with some or more round bodies, which give to it a torn appearance. It sometimes happens that the orifice remains gaping to such an extent, as to allow a centimetre of the interior of the cervix to be seen; but, on the other hand, it must be stated, that we have seen the mouth, in those who have had several children, differing in no respect from those who have never conceived.

In *pregnant women*, the lips—as has been remarked by M. Marc d'Espine—are soft and swollen, and the opening between them is so wide, as to allow the finger to get pretty far into the cervix.

Authors say, that in *women who are menstruating, or are about to menstruate*, the finger can be introduced within the cervix. This statement does not accord with our observation; for in a great many women, whom we have examined when in the state referred to, we could detect no difference in the diameter of the mouth of the uterus.

The position of the cervix is by no means uniform. Authors do not attach sufficient importance to this diversity of position. During several months, we were engaged in examining a great many women, with the view of throwing light upon this point; and we may remark, that great experience is required, before one can detect by the touch, certain of the less marked obliquities. We have rarely found the *cervix uteri* occupying a central place in the vagina. Generally there is more or less version forwards of the body of the organ, constituting what is termed *anteversion*. This deviation occurs as two to one of any other. Combined with anteversion, there is very commonly a *lateral obliquity*; and this is most frequently to the left side. This kind of displacement often exists to such an extent, that the *os uteri* is brought into contact with the roof of the vagina, so that in practising the *toucher*, one feels a rounded surface without an opening: and if the finger be not carried round the neck, it might be supposed to be in its normal situation. Here let us note the importance of the *toucher*. Most commonly, in examining with the speculum, the instrument will restore the organ to its proper position, and this kind of displacement—anteversion with obliquity—which is often the cause of the pain and other pelvic symptoms for which the practitioner is consulted, will escape notice.—*Gazette Médicale* for 14th June, 1845.

[We have translated the above in a slightly condensed form, from the first of a promising series of papers in course of publication, in the *Gazette Médicale*, entitled, “*Recherches Cliniques faites à L'Hôpital Saint Lazare, (Maladies des Femmes,) sur les Ulcérations du Col de l'Uterus, sur les Chancres Chroniques des Parties Génitales, les Bugons, l'Urétrite, la Vaginité, &c.*”]

It would not be fair to bring against the above conclusions a few exceptional cases, which we have met with; seeing that we are told, that the authors write from three years clinical study of their subject, during which time they have laboriously investigated the cases of 1748 hospital patients. It is important, however, that the reader should know the description of persons who are admitted into St. Lazare, and the nature of that institution. The following account is taken from the introduction to the memoir before us.

“St. Lazare contains three infirmaries. One is destined for female prisoners; another is for the punishment of young girls; and the third is for women subjected to the police regulations. The two first services are under the charge of Dr. Collneau. The other, which contains three hundred beds, is under MM. Delamorlière and Boys de Loury; it forms the hospital; it is separated from the rest of the buildings by a large court; and on the other side of it there are extensive grounds.

With regard to salubrity, St. Lazare is one of the best situated of the Parisian hospitals; the wards are spacious, well ventilated, and in every way comfortable. Two-thirds of the patients are prostitutes; the rest are chiefly of the working class, peasants from around Paris, and females who have come up to Paris from the provinces, in the hope of getting situations as domestic servants. The patients vary exceedingly as to age. In our wards we constantly see children of 14 or 15, and women of past 60, but the greatest number are between 18 and 28."]—*Lond. and Edin. Monthly Journal Med. Sci.*, July, 1845.

69. *Twins born at interval of two months.*—Dr. WILDBERG relates, in the *Annalen der Staatsärzneikunde*, (Heft 3, 1844,) a case in which a young woman 18 months married, was delivered on the 24th of March, at about the eighth month of pregnancy, of a child, which, though not fully developed, seemed likely to live. The labour was not particularly difficult, and the placenta was discharged in a quarter of an hour, by itself. The patient went on as usual, but no milk appeared in the breasts, and the child was given to a nurse. During her confinement, she felt the distinct movements of another child, and the abdomen increased in size. On the 20th of May, symptoms of another labour came on, and on the same day, a full-developed and strong child was born, which was much heavier than the first. On the third day after, the breasts were much enlarged, and there was considerable fever. This was diminished by appropriate treatment, after which she had sufficient milk to suckle both children.

70. *Inversion of the Uterus occurring at the fourth month of Utero-gestation.* Dr. SKAE relates, in the *Northern Journal of Medicine*, (July, 1845,) an example of this accident, which is particularly interesting from the inversion having happened in the absence of all foreign interference, and at an early stage of pregnancy, when there is less liability to its occurrence than at the full term of utero-gestation.

"I was requested," says Dr S., "on the evening of Saturday, the 25th of January last, to go and see a Mrs. F., (wife of a labouring man, residing in this neighbourhood,) who, I was informed, was very ill, in consequence of having had a miscarriage. On visiting the poor woman, I found her in a state of great distress and exhaustion. She complained of severe headache, of intense pain in the back, both iliac regions, but especially the left, extending down the thighs anteriorly, and even affecting both ankles. The pulse was small and weak, and ranged between 120 and 130, the skin cool, and covered with a clammy moisture. She stated that she experienced constant down-bearing pain, attended with flooding, and a sensation of something having fallen down within her. I was farther informed, that in consequence of considerable bodily fatigue which she had undergone two or three weeks previously in removing her family from Queensferry to this place, she had been seized with flooding on Wednesday the 15th (ten days before); that on the following day, abortion had taken place, after being four months pregnant; that on Saturday the 18th, she had felt so well as to get up and attend to some household matters, but that the flooding had afterwards increased to such an extent as subsequently to necessitate her confinement to bed; that in consequence of feeling very weak, she had that morning (Saturday 25th), about ten o'clock, taken some wine and water, which she immediately vomited; and in the act of vomiting, which was severe and continued, she was sensible of something falling down within her; and from that time up to the present—half-past ten o'clock, P.M.—that sensation continued, along with down-bearing pain, flooding, much general uneasiness, and extreme prostration of strength.

On introducing the fingers of my right hand into the vagina, I found the passage nearly filled with an elongated and somewhat irregular spherical tumour of pretty firm consistence, and having shreds of membrane attached to it; and on passing one or two fingers up to the os uteri, I could trace the neck of the tumour entering within it, and having an equally firm attachment, as it were, around the whole circumference of its inner margin, the os internum itself being open to the extent of two inches in diameter, and being otherwise in a dilatable condition. Without withdrawing my right hand from the passage, I examined with my left the hypogastric region externally, and by this means satisfied myself of the absence of any intervening body corresponding to the uterine tumour. Having now no doubts as

to the mass within the vagina, consisting of the uterus in a state of almost complete inversion, I immediately grasped the organ, and by moderate but steady and continued compression, in the direction of the os uteri, manipulating with my fingers as occasion required, I succeeded, in the course of some fifteen or twenty minutes, in returning the whole mass within it. In endeavouring, however, to push the fundus up to its normal position, the resistance and accompanying pain were so great as to deter me from persevering, and I desisted from the attempt, contenting myself for the present with having returned the whole organ within the os tincæ. The poor woman appeared to experience immediate and great relief from what I had done, and expressed herself to that effect. Before leaving her, I ascertained that the hemorrhage had ceased, and ordered cold applications in the event of its recurrence, and trusted her to the effects of an opiate and absolute quiet till I should visit her next day. The following morning I found Mrs. F. continuing apparently better: she had slept none during the night, but had felt tolerably comfortable. On examining per vaginam, however, I found the fundus uteri projecting a little beyond the os tincæ, which had contracted considerably since my previous examination; but I was able with little difficulty to myself, and only trifling pain to my patient, to push it upwards to its relative position within the pelvis. Recovery was slow, but uninterrupted; and, with the exception of slight occasional pain in the left ilium and both ankles, she is now in perfect health, and has menstruated naturally since the occurrence.

Mrs. F. is thirty-six years of age; she is somewhat above the average stature of females, and appears to be of spare and relaxed habits of body. According to her own account, she has generally enjoyed good health. She has been married sixteen years, and in the course of that period, has been eight times pregnant, inclusive of the abortion in question. Utero-gestation went on to the full period in the first six pregnancies, the first five children being born alive. In her seventh pregnancy she had an abortion at the third month of gestation, which happened about six months prior to the one under consideration. She has been attended by midwives in all her labours, with the exception of the fourth, when she employed a medical man. She states, that to the best of her knowledge of such matters, her sufferings during parturition have never been attended with any unusual severity, and that in no instance was there any undue force employed in removing the after-birth.

In this very remarkable case there can be but little doubt as to the accident having happened twelve hours previous to the time of the organ being returned. The immediate cause of its occurrence must have been the forcible contraction of the abdominal walls which play such an important part in the act of vomiting. According to the statement of Mrs. F., it was during the violent retching that for the first time she was sensible of something falling down within her. Up to this period she had complained principally of hemorrhage and accompanying debility, but after the vomiting her sufferings were greatly aggravated, and continued to increase in severity, till the displaced organ was returned. The continued hemorrhage, which had been going on during ten days previously, had produced a very relaxed state of the os uteri, which no doubt was greatly favoured by constitutional predisposition; and such a condition of the parts was but little calculated to offer resistance to the escape of the uterus, forced down, as it must have been, by the powerful action of the diaphragm and abdominal muscles on the contained viscera.

71. Obliteration of the Orifice of the Uterus. Pregnancy, delivery through an incision made in the Uterus.—DON THOMAS DE CORRAL Y ONA, Prof. of Clinical Midwifery at Madrid, relates, in the *Barcelona Medical Review*, the following interesting case which occurred in his practice.

Donna Maria Pifierio, aged 29 years, was delivered of her first child in 1843. The delivery presented nothing unusual. She again became pregnant, and labour declared itself on the 1st of February of the present year. Her attendant, Dr. Alarcos, not being able to discover the os uteri, although the head had passed the brim, and partly penetrated into the cavity of the pelvis, called Dr. Ona to his assistance. On the arrival of the latter, he found the statement of Don Alarcos correct. The superior third of the pelvic cavity was occupied by a round, hard,

tumour, formed by the head of the child, covered by the inferior region of the uterus. The only trace of the cervix, or os uteri, was two or three hard transversal lines, crossing each other at acute angles, and situated at the superior and posterior part of the vagina, near where the posterior lip of the cervix ought to have existed.

The head of the fœtus was felt plainly by the rectum. A sound introduced into the bladder, and directed upwards, was arrested by the head, behind the symphysis pubis; directed downwards, it slipped along the side of the head to within half an inch of the most prominent part of the eminence formed by the fœtus in the vagina, the extremity of the sound being easily felt through the parietes of the vagina and uterus. It was therefore evident that the head, in passing through the brim of the pelvis, had carried the bladder along with it, much lower down than is ordinarily the case. The orifice of the urethra was sufficiently dilated to admit the little finger, a circumstance worthy of notice. An attentive examination of the above data led to the following conclusions:—That there was complete obliteration of the orifice of the uterus; that the absence of the orifice could not be attributed to obliquity, as there was no opening to be found in any region of the eminence formed by the head, covered by the uterus and the superior part of the vagina; that the occlusion of the uterine opening was the result of the adhesion of the lips of the os uteri, as indicated by the linear cicatrices; that the position of the head was occipito-anterior; that the obliteration of the os was the only obstacle to delivery; and that this obstacle could only be overcome by vaginal hysterotomy.

The operation was deferred until the following morning, (it was then the middle of the night,) in order to take other advice, and all being unanimous as to its necessity, it was performed in the following manner:—An assistant first introduced two fingers, the index and the medius, into the vagina, the palmar surface being directed upwards, so as to compress the bladder against the arcade of the pubis, and so as to rest their extremities on the anterior region of the fœtal eminence. Dr. Ona himself introduced the index and medius of the left hand into the vagina and as far as the fœtal tumour, the palmar surface turned downwards. The rectum and the bladder were thus protected, and a space of about an inch circumscribed on the most prominent part of the tumour by the four fingers. He then, with a bistoury, the blade of which was protected by linen until within a few lines of the extremity, made an opening transversely, six lines in width, in the region corresponding to the cervix. The incision was made carefully, by degrees, and was two lines and a half in thickness; nature was then left to herself. The labour-pains became more acute and continued, and soon afterwards the vertex presented at the artificial opening, surrounded by the membranes. In the course of an hour the membranes broke, the liquor amnii escaped, and the head passed through the new orifice. Two hours and a half afterwards, the delivery terminated, without much hemorrhage, and without any other accident than incomplete laceration of the perinæum. The child was born in a state of syncope, but was easily reanimated. The woman was prevented suckling, owing to a slight attack of intermittent fever, which necessitated the administration of quinine. A month after she was quite well, although weak. The lochial discharge took place through the artificial os uteri, as usual. Two days after the operation, the circumference of the opening had a puckered appearance; its transversal diameter was an inch and a half, and the antero-posterior rather less. It has since become still more reduced in size, but it admits with ease the extremity of the index. Beyond the orifice there extends a narrow passage, about half an inch in length, which may be said to represent the normal uterine neck. As this orifice may tend to become obliterated, it will be necessary, says Dr. Ona, to employ proper means to prevent such an occurrence.—*Journal de Chirurgie.*

72. Plurality of Births. By Dr. J. G. RUTTEL, of Weissenburg.—As a general rule, there is only one child at a birth; but it is well known that some females have a predisposition to the production of twins, or even triplets. Among 7,774 births, there were 74 cases of twins, or 1:105; and one woman, a peasant, bore twins five times. In 1840, out of 574,293 births in the kingdom of Prussia, there were of twins 6381 cases, or 1:90;—of triplets 72 cases or 1:7976; and of quad-

triplets 1 case. In the nine years from 1826 to 1834, there were 645 cases of triplets. From various sources of information, public and private, I have met with fifteen cases of quadruplets, and four cases of quintuplets. At Drogii, in Bessarabia, in December, 1831, a peasant woman of ordinary strength bore six children at a birth! They were born alive, but died within twenty-four hours. It is a question, whether taking an equal number of cases, these plural births are not much more frequent among the poor than among the upper classes of society.—*Lond. Med. Gaz.*, Aug. 1845, from *Zeitschrift der Staatsärzneikunde*, 1844.

MEDICAL JURISPRUDENCE AND TOXICOLOGY.

73. Phosphoric Acid.—*Variety in its effects when pure or impure.* (*Caspar's Wochenschrift.*)—Many physicians (in Germany?) are of opinion, that the continued use of medicinal doses of phosphoric acid prove injurious to the coats of the stomach, that this is indicated after death by red or reddish-brown spots. Others again assert that they have employed it for many years with uniform success, and no injurious consequences.

This discrepancy induced MM. WEIGEL and KRUG to conjecture that the difference was owing to some chemical change in the article prescribed. That the acid might contain some phosphorous acid, and even possibly in some cases, arsenious acid, and thus the injurious effects might originate from these.

Pure phosphoric acid was prepared—then phosphorus was treated with a diminished quantity of nitric acid, leaving phosphoric acid containing phosphorous acid, in the proportion of ten per cent., and lastly phosphoric acid was made, containing a quarter per cent. of arsenic.

A series of experiments were undertaken on rabbits. It was at first intended to give it to them in divided doses, similar to the mode pursued when administering to the human subject, but this was found impracticable. The acids in a concentrated state were then given, by applying them in drops to the base of the tongue. The result was, that the pure phosphoric acid induced no injurious result, but the adulterated caused a *gangrenous phlegmasia* of the mucous coat of the stomach, and the cause of this evidently was, the development of phosphuretted hydrogen. The arsenical phosphoric acid proved to be a violent poison, even in small doses.

The experimenters are hence of opinion, that when gastric injury occurs, it must be owing to the use of an impure phosphoric acid—or in other words, its containing phosphorous acid—a circumstance (they add), which may readily occur, when sufficient nitric acid is not employed in its preparation.—*Encyclographie des Sciences Médicales*, February, 1845.

T. R. B.

74. Feigned Disease.—“A young person of hysterical disposition was bled and soon afterwards became affected with contraction of the fingers into the palm of the hand. Under the idea that the nerve had been wounded, the cicatrix left by the venesection was removed; the spasmodic action of the fingers immediately became relaxed, and their use was restored. By degrees, the spasm returned, and the operation was repeated with the same good effect, less prompt but not less perfect than before. The spasm returned a third time.

“I now began to suspect that even this strange degree of spasm, during which the nails actually grew into the palm of the hand, was not altogether real. I suggested that the patient should be blindfolded, and that a mock operation should be performed. It was performed: superficial but painful lacerations were made in the integuments; it was pretended that a nerve was laid bare, was divided, and it was loudly said, “Now the spasm will cease, and she will open her hand,” and she did open her hand! Water was coloured with the *tinctura lavandula composita*, for the want of blood. Again, after a time the spasm seemed to be returning, but now the whole truth was told, and the patient, for fear of exposure, took care to remain well.”

This case is quoted from Dr. Marshall Hall’s *Practical Observations and Suggestions in Medicine*, in the *Medico-Chirurgical Review*, with the observation, that if

Dr. Hall did not vouch for its authenticity, they would have taken it for one of the cleverly told stories in the "Diary of a Physician."

Apocryphal as this narrative may seem, still we have had a very similar instance in this city during the last winter, under the care of our principal surgeon. I merely advert to it at present, in the hope that the particulars may be published.

T. R. B.

75. Burns from Gunpowder—“In burns from gunpowder, it is to be observed, that from the momentary application of the cause, the injury is often of a superficial kind, unless in those cases, where, from the close contact, or large quantity of the powder, or from the accidental combustion of the patient's clothing, the parts become extensively and deeply involved. In many of the injuries originating from explosions of gunpowder, the hands and face are more particularly affected, and here the structure of the parts, as well as the nature of the accident, contribute to limit the number and extent of the vesications; the surface is blackened, the eyelashes, eyebrows, whiskers and whatever hairs may be contiguous to the affected part, are singed or entirely destroyed: grains of gunpowder are found lodged in the skin, some of them partially and others completely buried in it. When this has taken place, an indelible mark remains after the cure, not, as some have supposed, from each distinct granule of the powder remaining entire and enclosed in a minute capsule, but rather, I believe, from the granules being decomposed, and partially discharged or absorbed, while the carbonaceous or colouring matter remains in the skin, as in those letters or emblematic figures which we often see artificially imprinted on the arms of soldiers and seamen, by pricking out the figure with a needle, and inserting a little gunpowder into the skin; a mode of marking deserters, which is enjoined by the articles of war.”—Sir George Ballin-gall's *Outlines of Military Surgery*.

T. R. B.

76. Sudden death from a blow on the Jugular Vein.—At Portsmouth (England), a woman aged fifty, came to her death in the following manner. Deceased was a married woman, but lived with a young man named Tucker. They were returning home in the evening, quarreling. She was suddenly observed to be struck by some one, and was seen to run into the road and drop, screaming. She was immediately taken up by some lookers-on, and conveyed to her lodgings, but she never spoke more, and expired on the following evening. Suspicion fell on Tucker. He was arrested. A very protracted investigation was held before the coroner's jury, which ended in a verdict of manslaughter. The surgeon who examined the body, pronounced it to be in a very healthy state, none of the usual signs of an irregular life being visible. The whole system and brain, (with the exception of an effusion caused by the blow), were perfectly sound. The blow took effect upon the neck, over the jugular.

The editor mentions an additional instance, furnished by a gentleman high in the medical staff of the East India Company's service. Two fine healthy young men, in one of the Company's European regiments, were sparring for amusement, when one hit the other a heavy blow on the side of the neck, over the jugular vein. The young man thus struck, dropped down and instantly died. On examination, a large quantity of effused blood was found in the lateral ventricles, as also in the fourth ventricle.—*Lancet*, Jan. 11, 1845.

T. R. B.

77. Five individuals poisoned by arsenic, with remarks on the use of that poison, by the mountaineers of Austria and Styria, by Dr. A. FLECHNER. (*Transactions of the Imperial Medical Association of Vienna*)—In April, 1838, five individuals residing close to some mines at Schogmuhl, in Lower Austria, were attacked with symptoms of gastritis. The fever was slight, but there were much depression and debility. The author suspected the water of which these individuals drank to be the true cause, as they did not all eat together. He was confirmed in this supposition by the fact, that a large quantity of cobalt containing arsenic, had lain close to the spring during the winter, and he suggested that a portion of the arsenious acid in the cobalt ore had been dissolved by the snow and rain, and had filtered through the earth into the spring. The hydrated peroxide of iron given in small quantity at short intervals, produced a rapid and perfect cure in a few days. The

water of the spring on being tested in the usual way, gave abundant traces of arsenic.

Dr. Flechner then proceeds to give an account of the use of arsenic among the Styrian mountaineers. It appears to be employed as a tonic. It is taken by the hardy Tyrolese and Styrian hunters in doses which would certainly be most injurious to the generality of mankind. Some swallow as much as two grains of the mineral before they set out on their dangerous excursions in the mountains, and all affirm that they acquire thereby a great increase of bodily vigour and a power of enduring fatigue which they could not otherwise obtain. The reviewer, however, adds that Dr. Flechner does not appear to have witnessed the actual employment of the poison after this singular fashion.—*British and Foreign Medical Review*, April, 1845.

T. R. B.

78. *Fusel Oil*.—In the number of the American Journal of Medical Sciences, for October, 1844, I referred to Liebig's description of this substance and his statement that it was poisonous. It appears that some experiments have been made with it by Mitscherlich.

It is a colourless oily fluid, of a most offensive odour, and very distressing to the lungs. Its taste is sharp and burning, and it is lighter than water, and burns with a very brilliant flame. (It will be recollect that it is a product occurring in the manufacture of potato brandy, and not separated from it without great difficulty.)

In the experiments (on rabbits), the dose was thrown into the stomach of the animal by means of a syringe, and elastic catheter. When one drachm was thrown into the stomach of a rabbit, it ran about and was very lively, but striking itself against objects as if not seeing them. In ten minutes, it became depressed, could not stand erect, and fell on its side. It was, however, sensible to a pinch of the ear. The breath was not at first tainted, but in half an hour after the injection, a strong odour of the fusel oil proceeded from the lungs. The animal lay in this state for two hours and three quarters, and then gradually revived; its powers of motion were feeble, and the limbs were dragged along, but this paralysis soon went off, and he recovered completely.

Two drachms, when injected, induced great restlessness in about a quarter of an hour—and soon after it stretched itself out, and lay thus for four hours, apparently without sensation or motion; the pupils dilated, the breathing heavy, and the pulse rapid. Something like convulsive motion now appeared, but by and by the animal began to sit up, and next to move at will. At night it was seized with diarrhoea. After this it was quite well.

When two drachms were thrown into the stomach of a rabbit (about middling sized), the symptoms of intoxication and depression soon followed each other, and the animal lay without motion or sensation, and at the end of an hour and a half, was dead. On opening the abdomen, five hours and a half after death, there was an intense smell of the oil. The stomach externally was rather white and bloodless, but in its fundus, there was extravasation of blood, of a dark brown colour, and when this was scraped off, the epithelium was seen beset with small brownish-red spots, which proceeded from the tunica propria, from which the extravasated blood appeared to have flowed. The tunica propria itself was bloodless, and in parts soft and pulpy. The duodenum was reddened, and the bladder empty. When three drachms were injected, it became insensible in ten minutes, and died within an hour. Half an ounce caused death in a quarter of an hour, and an ounce, in four minutes.

When half an ounce was used on a young dog, death ensued in six hours.

It would thus seem, that in small doses, fusel oil is highly stimulating, and appears to act like alcohol, and then depresses rapidly. In large doses it is an active irritant poison, destroying the entire mucous membrane of the stomach.—(*Medizinische Zeitung*.) *London Medical Gazette*.

T. R. B.

79. *Strangulation*.—Professor Fritz, of Vienna, relates a case in which suicide by strangulation was attempted. The patient was restored, but he died on the sixth day. On dissection, his death was found to be owing to the superintervention of pneumonia.—*Archives de la Médecine Belge*, April, 1844.

T. R. B.

80. *Period of Gestation in Cows.*—Mr. C. N. BEMENT, of Albany, has given in the July number of the "Cultivator," the results of his observations on this subject. I have arranged them in a tabular form.

				Average period of Gestation.
In 1839 three cows produced heifer calves,				284 days.
1840 six cows	do	do	do	827
1841 eight cows	do	do	do	286
1842 four cows	do	do	do	284
1843 five cows	do	do	do	282
1839 eleven cows	do	bull	do	280
1840 seven cows	do	do	do	299
1841 three cows	do	do	do	293
1842 nine cows	do	do	do	287
1843 six cows	do	do	do	282
The average of all the males was				288 days.
The average of all the females was				282 days.

The extremes in the whole sixty-two was from 213 days the shortest period, to 336 the longest; difference 123 days. Mr. Bement, however, adds his doubts about the first, "for in no other instance has this period fallen below 260 days."

The extremes in the observations made by Earl Spencer, were from 220 to 313 days; difference 93 days. He, however, deems any calf produced at an earlier period than 260 days to be premature.

T. R. B.

81. *Cause of the Bruit de Souffle.*—At the meeting of the Scientific Congress, at Milan in 1844, M. LAZZATE read a memoir on auscultation, in which he advanced the idea, that the *bruit* was owing to the pulsation of the large vessels situated in the uterus, near to its external surface and which became compressed when that organ was in a gravid state. The bulk of the uterus gradually extending, would press them on the peritoneum, and which last necessarily yields slowly.

M. Raffaele, without denying the truth of this, observed that if so, the *bruit* ought to be observed in all cases of extensive hypertrophy of the womb.—*Archives de la Médecine Belge*, April 1845.

T. R. B.

82. *Remarkable Injury to the Head, compatible with life.* By Dr. O'CALLAGHAN, Surgeon of the 11th Hussars. Read before the Surgical Society of Ireland, January 1845.

Lieut. Fritz was wounded by the bursting of a fowling piece, in the island of Ceylon on the 23d of January, 1828. He was knocked down by the blow, but immediately rose without assistance and walked to a neighbouring cottage where the wound continued to bleed for several hours, and produced a state of faintness approaching to delirium. In the evening, he was conveyed to Fort M'Donald, a distance of four miles, in a palanquin; on his way and after his arrival, the bleeding continued at intervals, but less copiously. "Bloody serum now flows from the wound, which is of a circular form, about one inch in diameter, and situated above the nasal process of the frontal bone, the outer plate of which corresponding to the external wound, is destroyed. The surrounding integuments, particularly over the right eye, were much swollen and painful when touched; complains of constant pain shooting through the forehead, and restlessness, which effectually prevents sleep; mental faculties unimpaired."

It is not necessary in this place, although interesting as a case in surgery, to continue the details. It is sufficient to state that the wound healed, and Lieut. Fritz returned to his duty and was subsequently promoted.

Towards the end of the year 1828, a metallic body began to protrude through the palate into the mouth, and continued gradually but steadily to advance. The sanguous discharge accompanying it was extremely offensive. In May, 1835, it had protruded so far that an attempt was made to file it off, but the pain was unendurable and the attempt was relinquished. Lieut. Fritz was intemperate, and he died of an acute attack in March, 1836.

On examining his head, the whole of a large iron breech of a gun, with the screw that attached it to the stock, was found lodged in the forehead. The anterior part of the right hemisphere of the brain rested upon the flat part of the breech,

which received the charge, separated from the iron surface only by a false membrane. The weight of this mass of iron which remained comparatively quiet for so many years in this extraordinary situation, was near three ounces and its length two and three-quarter inches.

In the discussion that followed the reading of this case, Sir P. Crampton said, it was a remarkable coincidence, that at the Richmond Hospital, a case had occurred exactly similar, in which the breech of a gun had lodged in very nearly the same place; the wound in this instance had proved fatal, the breech having passed through the orbital plate of the frontal bone, and the man survived only 48 hours. "At the same time, it by no means followed that the breech did not penetrate the brain in Dr. O'Callaghan's case, for no two of these accidents are observed to run a similar course."—*London Med. Gaz.*

T. R. B.

83. *On the Secretion of Urine in cases of poisoning by Arsenic.* By O. DE LAFOND.—The experiments of Orfila lead to the conclusion that the urinary secretion is continued during acute poisoning by arsenic, and those of Flandin and Danger that it is suspended. The author, who is professor of Legal Medicine in the Veterinary School of Alfort, undertook farther experiments on horses and dogs, in order to endeavour to decide the question.

The particulars of twelve experiments are given, and their results are thus summed up. 1. The duration of the poisoning in horses has been one hour, one hour and a half, eight hours, twenty-one, twenty-nine hours, and never more than fifty-one. In dogs it has been five hours, eight hours, but not beyond twelve hours. 2. The symptoms observed during life, and the lesions after death, have completely demonstrated acute or sub-acute poisoning. In some of the animals the inflammation of the mucous membrane was so violent that in an hour it produced the formation of several metres of cylindrical false membrane. 3. In none of the animals has the secretion been suppressed during the poisoning. 4. The mean proportion of urine secreted in an hour by animals in good health, compared to that secreted during the same time by animals of the same species which have been poisoned, is for the horse :: 347 : 100, and for the dog :: 24 : 4, a proportion which shows that the secretion is not suppressed, but very notably diminished. 5. The urine does not begin to yield the poison until very evident symptoms of poisoning show that the arsenic has been absorbed and is accumulating in the blood. Nevertheless the time which has elapsed between the administration of the poison, and its detection in the urine has never been less than one and never more than seven hours. (*Mémoires de l'Academie Royale de Médecine*, vol. xi.)

—*Medico-Chirurgical Review*, July, 1845.

T. R. B.

84.. *Poisoning by Hemlock, (Conium Maculatum.)* By JOHN HUGHES BENNETT, M.D., of Edinburgh.—The following is an extremely interesting case, inasmuch as it furnishes us with the symptoms and appearances of poisoning by hemlock, unaffected by antagonist remedies. It will also suggest strong doubts as to the irritant nature of this substance, whilst the whole history is confirmatory of the results obtained by Dr. Christison in his experiments, with *Conia*, the alkaloid.

Duncan Gorr, a tailor, aged 43, in extremely reduced circumstances, so poor, indeed, that he had not eaten anything on the day in question, greedily ate of certain vegetables brought home by his children between 3 and 4 P.M. On finishing his meal, he rose, saying he would endeavour to get some money in order to procure food for his children. At this time, he was in perfect health. He walked about half a mile to the house of an acquaintance, with a view of selling him some small matters. This man, on his entering the room, thought at first that he was intoxicated, because he staggered in walking. On passing through the door also, which was narrow, he faltered in his gait, and afterwards sat down hastily. He stayed ten minutes, during which time he conversed readily, drove a hard bargain, and obtained four pence for what he sold. He did not complain of pain or uneasiness, was not excited in manner or speech, and his face was pale and wan. On rising from his chair he was observed by the shop boy to fall back again, as if he had some difficulty in rising. On making a second effort he got up and was seen to stagger out of the house and down the steps. This was at four o'clock.

He was next seen standing with his back to the corner of the street. From this

he staggered to a lamp post a few yards further on. Here he again paused a few minutes and then went forward in the same vacillating manner, for a short distance, until he sat down at the opening of the common stair of a house. He was supposed by all who saw him to be intoxicated, and two women who had noticed him told a policeman to take him away. This officer found Gorr sitting at the foot of the stairs, and thought him drunk. He spoke to him, and in reply Gorr desired to be taken to his own house at the top of the Canongate. Gorr added that he had completely lost his sight and had not the perfect use of his limbs, but expressed his willingness to walk forwards until the policeman could obtain the assistance of his comrade. He was then raised up and supported by one arm, but after moving with great difficulty past four or five shops, his legs bent under him, and he fell on his knees. Some water was now given to him, which he was incapable of swallowing, and the policeman left him to procure a barrow. On returning, he was found surrounded by women, who were pouring cold water on his head and sprinkling his forehead. On being placed on the barrow his legs trailed after him.

He was now conveyed slowly to the main police office. On his way he seemed sensible, and endeavoured to say something, but could not articulate. Still on his arrival, although his limbs were paralyzed, his intelligence was so far restored that in reply to a question he told the turnkey his exact address in the Canongate.

Dr. Tait, the surgeon of the police force, was sent for, and saw him about a quarter past six o'clock. He was laying on his back, with his head elevated. He was sensible when spoken to, and tried to turn his face to Dr. Tait, and slightly raised his eyelids, but appeared unable to speak. His power of motion was completely prostrated, for when the doctor lifted his arm and laid it down, it lay where it was put, and when his arm-pits were tickled he seemed to manifest a little sensibility, but could make no exertion to rid himself of the annoyance. There were occasional movements of the left leg, but they appeared rather to be spasmoid than voluntary. Several efforts were made to vomit, but they were ineffectual. His pulse and breathing were perfectly natural. The heat of the skin was also natural. At ten minutes before seven the action of the heart was very feeble, the pupils were fixed, and the countenance had a cadaverous appearance. He was sent to the infirmary, but arrived there dead. This was shortly after seven o'clock.

On dissection, an unusual quantity of fluid blood flowed from the scalp and longitudinal sinus when divided. There was slight serous effusion. The lungs were throughout intensely gorged with dark-red fluid blood. The blood in the cavities was mostly fluid, presenting only here and there a few small grumous clots. The liver was healthy; the spleen soft; the kidneys congested, but healthy; the stomach contained a pultaceous mass formed of a raw green vegetable, resembling parsley. Its contents weighed eleven ounces, and had an acid and slightly spirituous odour. The mucous coat was much congested, especially at its cardiac extremity. Here there were numerous extravasations of dark-red blood, below the epithelium over a space about the size of the hand. The intestines were healthy, here and there presenting patches of congestion with the mucous coat. The bladder was healthy, but its inner surface was much congested from venous obstruction.

The blood throughout the body was of a dark-colour and fluid, even in the heart and large vessels.

The vegetable matter found in the stomach was composed chiefly of fragments of green leaves and leaf stalks. Although much was reduced to a pulp, still a considerable quantity of both had escaped the action of the teeth. Dr. Bennett carried as perfect a fragment as could be found to Dr. Christison, who pointed out that they could scarcely be anything else than the *laciniae* of the conium maculatum or common hemlock. Next day, he bruised some of the leaves in a mortar, with a solution of potash, when the peculiar musty odour of conia was so strongly evolved, that Dr. Douglas, MacLagan, and others, although previously unacquainted with its nature, at once pronounced it to be hemlock. Finally, Dr. Christison procured a fresh specimen from Salisbury Crags, near which the children had gathered their vegetables, and when compared with the fragments found in the stomach, they proved to be identical.

Here then was an instance of death from hemlock in three and a quarter hours,

without convulsions or delirium of the frantic kind—results commonly attributed to it, and of which indeed we have cases. Dr. Christison, however, cautions us to receive these with reserve. “ Independently of other considerations, there is often no certainty that the poison was really the hemlock of modern botanists, and not some other umbelliferous vegetable.”

In experimenting with the extract of hemlock and its alkaloid, conia, the effects observed were “ palsy, first of the voluntary muscles, next of the chest, lastly of the diaphragm, asphyxia, in short from paralysis, insensibility, and with slight occasional twitches only of the limbs.” The similarity of these to the symptoms in the case of Gorr, is quite striking.

To the scholar, this case is also extremely interesting from the fact, that hemlock is supposed to have been the poison administered to Socrates. The objection to this has been, the fact that delirium and frenzy, and also giddiness and convulsions, are recognized as symptoms of this substance. But if we compare the case of Gorr, with the narrative of Plato, we cannot fail to be struck with the resemblance.

I have neglected to mention that early in the day, Gorr partook of some whisky with some of his associates. The four pence also, which he had received, could not be found, and it is barely possible that he employed it in purchasing liquor. How far the alcohol may have aided the effects of the hemlock, it is, perhaps, difficult to say, but at all events, we have the result as little affected by *ingesta*, as it is possible ever to expect.—*Edinburgh Medical and Surgical Journal*, July, 1845.

T. R. B.

85. *Rape.*—The prisoner was tried at the Old Bailey on an indictment for rape, committed on the person of a girl thirteen years old. The evidence was, that the prisoner made her quite drunk, and whilst she was insensible, violated her. The jury found that the prisoner gave her the liquor for the purpose of exciting her, and not intending to render her insensible and then have connection with her. The prisoner's counsel objected that the crime of rape was not proved, and that point was reserved for the opinion of the judges. April 26, 1845. (Before all the judges, except Baron Parke and Justice Maule.) Ballantine, for prisoner, now contended, that in order to constitute the crime of rape, there must be an actual resistance on the part of the person ravished, and that the form of the indictment containing the words “ violently and against her will,” proved that necessity; but further that in the present case, according to the finding of the jury, there was neither force nor fraud. It was an improper thing to give the girl liquor, but the jury had negatived any intention of committing a rape. All the evidence went to show that if the man had any intention at all, it was to induce the woman to consent; and the learned judge distinctly put to the jury the two questions, whether the prisoner gave her the liquor intending to have connection with her by force, or only for the purpose of exciting her.

Upon consideration, the judges decided that the conviction was right.

It is, therefore, according to English law, a rape, if a man makes a woman quite drunk and then violates her person, though the jury find that he administered the liquor for the purpose of exciting her only, and not with the intention of rendering her insensible, and then having sexual connection with her. *Rex vs. Campelin, 1st Carrington & Kinwan's Reports.*—*London Medical Gazette*, July, 1845.

T. R. B.

86. *Vaporization of Mercury.* By JOHN DAVY, M. D.—In a press, from which light was excluded, and within which there was very little circulation of air, a pneumatic mercurial trough was kept, holding about thirty pounds of quicksilver, and also a bottle of iodine, closed, but not carefully, with a glass stopper. The trough stood on an under shelf, the bottle on an upper one, one over the other, about two feet apart. After about two months that they had remained undisturbed, at a temperature ranging between 50 and 55°, having occasion to use the iodine, my attention was arrested by an efflorescence, as it were, of a brilliant red colour, consisting of minute crystals deposited on the upper rim of the neck of the bottle, not on its under, and on the stopple above, most abundant on the rim close to the stopper, gradually diminishing towards its top.

The red crystalline matter examined, was found to be biniodide of mercury, and

as such, it is, of course, a proof that the metal is capable of passing into a state of vapour at a comparatively low temperature. I did not attempt to determine the quantity of the iodide formed; from its appearance, it may be conjectured to have been at least one-tenth of a grain. *Edinburgh New Philosophical Journal*, July, 1845. [A very analogous instance, occurring to Professor Faraday, is quoted in the last edition of Beck's *Medical Jurisprudence*, vol. ii, p. 459.] T. R. B.

87. *Sudden access of Insanity.*—The following occurred recently at Paris. An engraver, after having spent twenty years on the engraving of a portrait, took the proofs to a publisher, who had agreed to purchase the plate. In the course of conversation, some disparaging observations were made on the work. The engraver rushed into an adjoining room, and dashed his head violently against a stone chimney-piece, producing severe injury to the head, on a recovery from which, it was found that his reason was entirely gone.

It was long since remarked by the celebrated Pinel, that persons endowed with highly sensitive feelings, might by any sudden or violent emotion, be immediately deprived of understanding. Thus an attack of insanity may be caused in a moment by extreme joy or terror. He gives the following curious instances.

During the French Revolution, an artilleryman proposed to the Council of Safety, a new piece of artillery, which he had invented, and which was to have the most deadly effects in war. A day was appointed for the trial of this invention at Meudor, and Robespierre wrote a letter to the inventor, and expressed his approbation of the invention in very flattering terms. The man to whom it was addressed, became motionless on reading it, and he was soon after sent to the Bicêtre, in a state of complete dementia.

About the same time, two young men, brothers, entered the army, and during a bloody action, one of them was killed by the side of his brother. The latter became instantly motionless like a statue, and lost his reason. He was conveyed to his father's house, and at sight of him, a third son, owing to the shock produced by the death of one of his brothers, and the insanity of the other, became also insane. They were for many years confined in the Bicêtre, under the care of Pinel.

There is a well-known case related by Mr. Travers, (*constitutional irritation*), of a young lady, who was found one morning in a state of complete dementia, playing with the fingers of a skeleton, which had been placed on her bed the night before.

Not long since, there was reported the case of a naval officer, in the command of one of the ships lately forming the squadron off Cork. He suddenly rushed on deck, ordered the ship to be cleared for action, and the guns pointed and fired on the town. So little was insanity suspected, that his orders were about to be obeyed, when fortunately, it was resolved to delay the execution until they were confirmed by his superior in command. It was found that this officer had been attacked with mania, the cause of which did not appear, but as it was not brought on by any sudden or violent emotion, it may have been in this instance long dormant.

The sudden occurrence of dementia, under the circumstances above mentioned, renders it difficult to suppose that this form of insanity is in all cases necessarily dependent on physical changes in the brain.—*London Medical Gazette*, April, 1845.

T. R. B.

N. B. In the contributions to the science of Toxicology in this number, and in all subsequent ones, it should be understood that they are in advance of the latest edition of Christison's Treatise on Poisons. An American editon of this valuable work has recently been published, and it is to be hoped that physicians will avail themselves of the opportunity offered to become familiar with its contents.

T. R. B.

AMERICAN INTELLIGENCE.

ORIGINAL COMMUNICATIONS.

Case of Ascites, cured by the Injection of a Stimulating Fluid into the Peritoneal Cavity. By JOHN B. SHERRERD, M.D., of Belvidere, N. J.

Mrs. Newman, of Warren county, N. J., aged 40, mother of eight children, had been in declining health for a year or more previous to Dr. Clark's seeing her; a short time before which she was supposed to be again with child. Her debility and emaciation rapidly increased, and also a distension of the abdomen, added to which she had a prolapsus of the bladder. Dr. Clark saw her for the first time on the 30th November, 1843; he found her in this miserable condition, with poor appetite and fever, suffering constant uneasiness while sitting, and pain when on her feet. All ordinary remedial medical agents were used to no purpose, and on the 14th December, Dr. C. deemed it necessary to perform paracentesis abdominis, and he drew off $5\frac{1}{2}$ gallons. She bore the operation well. Emaciation, however, continued to advance. She now submitted to small bleedings, and the belly filled more slowly. On the 4th January, 1844, she was again tapped, and gave $3\frac{1}{2}$ gallons; her decline was now more rapid; no appetite, and great emaciation. It now seemed evident to Dr. C. that but one more tapping could be borne—he considered that the debility induced by the operation would so lessen the liability to inflammation, that he felt justified in injecting an astringent infusion, and thus produce some alterative effect upon the secreting surface of the peritoneum. On the 23d February, she was subjected to the operation the third time; three gallons were removed. She was now very prostrate, requiring powerful stimuli. Her physician had prepared an infusion of the dried sliced fruit of the persimmon, (*Diospyros Virginiana*;) with this he charged a ten ounce syringe, to which he had attached a large-sized catheter. This he introduced several inches into the wound in the abdomen—he allowed it to remain in ten minutes, when the belly was emptied by pressure upon its walls. The doctor continued his personal attendance at the bedside 24 hours. Prostration was extreme; but reaction became established at the end of 24 hours, and in 36 she had some fever, and great tenderness of the abdomen. She could not move nor speak above a whisper during the first 36 hours. Tepid fomentations were applied to the abdomen, and continued until a bandage could be borne.

A profuse bronchorrhœa now set in, and in an hour a large silk handkerchief would become saturated. This was on the third day after the last tapping—it was checked by inhalations of chlorine—this drove the water from the lungs to the skin. The diaphoresis becoming too profuse, it was stopped principally with lime water, and frictions with pepper and brandy. After four or five days, the discharge from the lungs returned, and a similar medication drove it again to the skin. The same applications were re-applied, and at the same time the inhalations. During the metastases, the water discharged decreased in quantity, and the patient's appetite increased.

A gastrorrhœa now occurred ; constant nausea ; frequent retching, and some vomiting at intervals. An emetic was given, and the morbid tendency seemed overcome. The urinary secretion now became fully established, and she recovered, so that by the 10th of June, '44, all her functions were fully restored, and since that time she has enjoyed perfect health.

I make no comment on the case, and would merely call attention to the recent experiments of M. Velpeau, an account of which was given in a No. of this Journal of last year.

The report of the above case was placed at my disposal, by Dr. Wm. C. Clark, an eminent practitioner, of twenty years standing, and who had charge of the patient.

Obstruction of the Urethra—Restoration of that Canal. By JAMES P. JERVEY, M. D., of Charleston, S. C.

Although urethral affections are of very common occurrence, and much has undoubtedly been done in this department, therapeutically as well as pathologically, they still remain difficult of management, and entail upon their subjects the most dreadful suffering, and, not unfrequently, the most fatal results. Believing, therefore, that every fragment which can be collected may be made available for practical purposes, I have recorded the following case, which may prove interesting from the very great obstruction existing in the urinary passage, the long continuance of the disease, and the extent of the wound necessarily made during the operation.

In the month of August, 1838, I saw John, a mulatto, (carpenter by trade,) about 60 years of age, who was suffering from an attack of ischuria. From the account which he gave of himself, he had had more or less obstruction to the passage of urine from about his twenty-fifth year, which had increased steadily until within six or eight years previously, when he had been first seized with complete retention of urine. This attack had been relieved with much difficulty. He, however, became subject to a constant recurrence, not very frequent, but attended with regularly increased and prolonged suffering. Finding, upon examination, the impossibility of introducing catheter or bougie, and all other means of relief having failed, I proposed to cut down to the strictured spot, which I did in presence and with the assistance of one of my medical friends. Upon reaching the point of the sound, however, I found that I had laid open one of the numerous false passages, existing on each side of the urethra—upon withdrawing the sound, the patient, in making a violent exertion, succeeded in expelling a few drops of urine, which so encouraged him, that he refused to submit to any farther surgical interference. His bladder was very gradually emptied ; and he remained free from any as violent return of his disease during two years. His micturition continued, however, very difficult and painful.

In August, 1840, I again found him suffering under a violent attack of ischuria. He had passed no urine for about 24 hours ; the bladder was very much distended, and its size could easily be traced through the walls of the abdomen. As he obstinately refused to submit to an operation upon the strictured portion of the canal, I determined to puncture the bladder. Upon withdrawing the catheter which I had been endeavouring to introduce, a few drops of blood and urine followed, which induced me to postpone any further interference for the present. The urine continued to flow guttatum during more than 24 hours, when he suddenly complained of great uneasiness in the perineum. Upon examination I found a very large abscess form-

ing. This abscess was opened, giving vent to a free passage of urine. The slough which followed was so extensive, that his fright determined him (as he had suffered much from smaller ones previous to my first attendance upon him in '38), to place himself entirely in my hands.

On the 20th of August, then, in presence of my friends, Prof. Dickson, Drs. Bellinger, Wragg, &c., I introduced a sound into the urethra, as far as we thought that we could fairly trace the course of the canal. My disappointment, however, was great, when, on cutting down to the sound, I found it in a false passage. The number of these passages was extraordinary, produced by the repeated forcible attempts to reach the bladder during the earlier attacks of his disease, before he came under my care. I then withdrew the sound to within a comparatively short distance from the mouth of the urethra, and having cut down upon it, and followed it to the opening in the perineum, we succeeded in passing a catheter into the bladder.

The wound extended forwards through the greater portion of the scrotum, and was dressed in the usual manner, the catheter having been left in the bladder. No untoward circumstance happened until the seventh day; the healing of the wound having progressed kindly; the quantity of the urine passing through the ulcer in the perineum, having very much decreased. On the seventh day the catheter (from the impatience of the subject), escaped, and I had much difficulty in re-introducing it. I then allowed it to remain until all trickling of the urine through the perineum had ceased, when I withdrew it about the seventh day afterwards; inserting it, however, whenever necessary, for the relief of the bladder. The patient steadily advanced to a cure, and between the third and fourth week after the operation, passed his urine in a full stream, without any mechanical assistance. This he continued to do, without the slightest return of former difficulty, up to the time of his death, which happened (in consequence of lately acquired intemperate habits), a few months since, on a neighbouring plantation.

His death having occurred at a distance from the city, I was prevented from making a post-mortem examination of the part.

DOMESTIC SUMMARY.

Peculiar case of Gelatiniform Cancer, in which nearly all the organs of the body contained colloid tumours; with the appearances on dissection.—By JOHN C. WARREN, M. D., Prof. of Anat. and Surg., Harvard University. (*Medico-Chirurg. Transactions*, vol. xxvii.) This case, communicated to the Royal Medico-Chirurgical Society of London, by our distinguished countryman, Prof. Warren, is remarkable, from the disease being diffused through nearly all the textures of the body, without presenting any one considerable mass, and also from exhibiting an union of the three admitted forms of malignant disease, scirrhoma, cephaloma, and gelatina. It lends support to the opinion of the identity of these diseases.

“J. B., a painter by trade, residing in Boston, not married, twenty-five years of age, applied to me in May, 1840, on account of a tumour upon the right side of the neck.

“In his family history there did not appear anything peculiar: his father, being forty-eight years of age, died of inflammation of the lungs; his mother was still living, in good health; two brothers and two sisters were also living, in health; he had lost one brother by measles in early life. He himself had measles, and afterwards jaundice, when very young; his health from the time of recovery to the present has been good, with the exception of an intermittent fever at New Orleans

about three years since, from which he recovered on leaving the city; he has been able to work, until within a month.

"At the time of the application, his personal appearance was emaciated and pallid; he complained of loss of appetite. The tumour, for which he applied, had existed for about a year and a half, and was situated on the right side of the neck, immediately above the clavicle. It was rather hard, slightly movable, and presented, on the whole, the appearance of a scrofulous enlargement of the lymphatic glands, except that it was harder than those glands usually are when thus affected. There were also one or two other tumours upon the trunk, which had appeared within a month, and one upon the left arm, which may be described as a type of the others, situated on the anterior and middle part of the upper arm. It had a bluish-white colour. The skin which covered it was perfectly natural as to colour, and was movable on the surface of the tumour. It was somewhat elastic, about the size of a nutmeg, not painful, nor sensitive to the touch, and had, on the whole, a slight resemblance to a limited varicose tumour.

"Presuming his disease to be of a scrofulous character, I recommended the internal use of the tincture of iodine, and an ointment to be applied externally containing the hydriodate of soda, four leeches to the tumour of the neck, to leave his business, and go into the country.

"After the lapse of ten days he came to me again, calling himself better: the tumour in his neck was a little diminished: the continuance of the same remedies was therefore advised to him. Ten days more having expired, he came again to me, when I found that the tumour in the neck had continued to diminish, but his general health was not so good. I therefore advised him to omit the external use of the hydriodate of soda, but to continue the internal use of the tincture of iodine, and to make a fresh application of leeches to the tumour.

"On the 20th of June he entered the Massachusetts General Hospital, under the care of Dr. Townsend; and, as his case was interesting, I continued to observe him carefully through the different phases of the disease which presented themselves. At this time his general health did not appear very much affected; his pulse and tongue indicated no great disturbance; the appetite was tolerable; but there was some oppression after taking food. The tumour of the neck was about the size of a hen-egg; there were also a number of tumours scattered over the surface, especially of the abdomen, generally about the size of a hazelnut, many of them, however, not being larger than small shot, irregularly rounded in form, elastic to the touch. The skin was perfectly white over them, the bluish tint appearing to emanate from the internal tumour through the transparent skin. At my request Dr. Townsend opened one of these tumours, on doing which, after the skin was cut, a delicate membrane was observed, covering a little cluster of pearl-like granulations, containing a gelatinous substance and some watery fluid. A small vein ran into the tumour, ramifying freely over the surface of the cells, and from this issued venous blood, which continued to flow for a few minutes.

"The day subsequent to his admission to the hospital he began to complain of severe pain in the abdomen and back, which finally limited itself to the left iliac region and left hypochondrium, and after several days was much relieved by the application of leeches. Pain in the head also commenced, while he yet laboured under the pain of the abdomen, say ten days subsequent to the origin of the latter. It continued to advance in severity for some days, until the left eye was affected, the conjunctiva being considerably injected: by suitable applications this was relieved, and for a day or two he seemed comparatively comfortable, the pain in the head being less. The respite, however, was only for a couple of days, when the pain in the head again returned, and continued to increase in severity till it became very violent, all treatment affording only a temporary relief.

"Upon the eighteenth day of this second accession, and the fifty-third of his admission to the hospital, the pulse was very variable, from 68 to 100; his appearance resembling that of a man under the influence of opium, being stupid, and roused with difficulty. These appearances were ascribed to the opiate he had taken, but without good reason, as it appeared subsequently; for, after the lapse of a fortnight, during most of the time being more or less stupid, he said that he had double vision with the right eye, there being some dilatation of the pupils, with strabismus. In a degree this was relieved previous to his discharge, which took

place, at the request of his friends, on the 2d of September, his condition not being improved. The tumours, with no variation, except a slight increase in size and modification of colour, being darker, had now increased to a number between thirty and forty, covering the abdomen and limbs.

"After his return home he lingered till the 21st of September, gradually sinking, without any material change in his condition, excepting that he was delirious for two days before death.

"*Autopsy.*—In the examination of the body, which took place eight hours after death, I was aided by the excellent pathologist Dr. J. B. S. Jackson, a number of other gentlemen being present, among whom were Drs. Townsend, Adams, of Waltham, and J. M. Warren.

"*External appearance.*—The body was emaciated; its surface studded with subcutaneous tumours, generally about the size of a hazelnut, of a bluish colour, and of slight elasticity to the touch.

"*Tumours.*—Several were removed and opened; they were composed of small granulations, constituted by sacs containing a substance which appeared at first view to be wholly gelatinous, but which, on being divided, discharged a small quantity of viscid fluid. The colour was a mixed gray and red; they were slightly transparent; in consistence they were friable: most of them were connected with small veins, and had a vascular tissue upon their outside. Many of the lymphatic glands were indurated, especially the inguinal, which exhibited very large absorbent vessels running in and out of them. The tumour of the neck had not varied in size, and consisted of a yellowish-white, moderately firm, elastic substance; in colour, resembling the deposit sometimes seen in scrofulous glands, but in consistence, different from that of these glands, in having a greater degree of firmness. The thyroid gland was enlarged, hardened, and exhibited small gelatiniform bodies.

"*Head.*—The cranium being cut into, displayed a number of the minute, semi-transparent, gelatinous tumours in the diploë of the frontal and occipital regions. Near the superior angle of the occipital bone was a spot, about half an inch in extent, which reached quite through, so as to adhere to the dura mater; also another, which did not extend through, existed upon the temporal bone. The excavation in the bones was filled by small pearl-like granulations, of a gelatinous consistence. The membranes investing the brain were dry and opaque: the brain itself appeared dry; its vessels, particularly of the cineritious part, were dark-coloured. In the ventricles were from 4 to 5 ounces of serum; the plexus choroïdes was pale, and without tumours.

"*Thorax.*—The tumours were found in the muscles, both internal and external to them; they also occupied the ribs, to such an extent as to render some of them quite soft. A considerable number existed in the mediastinum, the pleura itself being quite healthy. The heart, externally, was covered with gelatiniform bodies generally about half the size of a pea; some were larger. These tubercles were most abundant in the course of the principal arteries and veins. The muscular substance of the auricles and ventricles presented a considerable number of the gelatinous formations. In the cavity of the left auricle were found two gelatiniform bodies, of a globular form, adhering to the internal parietes of the auricle. These, examined by the microscope, were seen to be composed of minute granules, barely visible by a glass magnifying thirty times, but by the aid of the most powerful simple lens, these granules appeared to contain others. The coagulum found entangled in the mitral valves had somewhat the same appearances under the same magnifying powers. The lungs appeared, at the time of the autopsy, to be healthy, but could not then be minutely examined. On a subsequent examination, a small gelatiniform tumour was noticed on the surface of the left lung, and on cutting into these organs, a number of similar bodies were found sparingly scattered throughout their texture; in other respects, these organs were somewhat hyperæmied, but for the rest in a perfectly healthy state. The bronchial glands were hardened, and exhibited the same appearance as the tumour of the neck.

"*Abdomen.*—The absorbent vessels upon the surface of the abdominal muscles contained an opaque substance, which struck us at the time to be of a cerebriform character; but whether it was really encephaloid matter, or the opaque form of the gelatinous substance, which existed in other parts of the body, could not be

certainly ascertained. The omentum was free of fat, and of tumours. The mesentery was studded with the tumours, and the mesenteric glands were enlarged: one just above the right inguinal canal was as large as an English walnut: the whole of them containing the same whitish opaque substance as the tumour of the neck. There were a number of these tumours about the pyloric orifice of the stomach; but the texture of the stomach itself was healthy, and had no gelatiniform appearances. The liver was greatly diseased, being filled with the tubercles, which projected above the surface. These tubercles, when cut into, appeared of a yellowish-white colour, and granulated texture; they were destitute of the transparency which characterized the tumours throughout the body, and closely resembled the appearances of scirrhoma of the liver depicted by Carswell. The substance of the liver itself was dark. The pancreas was much enlarged and hardened, of a rounded oblong form: there were some of the tumours on its surface. The spleen was not altered.

"*Kidneys.*—These organs had in their interior a number of the gelatiniform tumours, particularly the right kidney. There were many of them in regular masses, contained in the cellular substance surrounding the kidneys. The supra-renal capsules were enlarged and hardened.

Pelvic organs.—The bladder was free from disease. The testes were enlarged, and in each of them two or three indurated, opaque, whitish tumours might be found. The thoracic duct was larger than natural at the lower part, and was compressed above by a number of diseased glands. The arteries and veins were thin and pale, and exhibited no appearance of redness in their internal coat. The blood was small in quantity, thin, watery, and of a dark colour: no gelatiniform bodies were detected in it.

"The appearance of the muscles covering the thoracic cavity has been already described. Many of the muscles, in other situations, presented on their surface and in their substance, a great number of gelatiniform bodies, varying in size from that of a pea to that of granules not distinctly visible without the aid of a microscope. Some of the muscles seemed to be almost composed of these bodies, particularly the gracilis muscle of the thigh and the rectus muscle of the abdomen, which were carefully dissected, and a portion of them preserved.

"*Remarks.*—The appearances in this case, as already stated, were peculiar, and not exactly accordant with those which I have seen described in any case that I am acquainted with. The texture of the large tumour of the neck, and that of various lymphatic and mesenteric glands, considerably resembled the common scrofulous tubercles of these glands.

"The lungs, which, according to M. Louis, are always found to contain tubercles of a scrofulous character, when these exist in any part of the body, formed a remarkable exception in this peculiar disease, to the condition of nearly all the other organs.

"The appearances in the liver were such as are seen connected with scirrhoma; but the vast number of tumours found in most of the organs of the body were of quite a different description. They bore a decided resemblance, in texture, to what has been described by Cruveilhier, Velpeau, and other distinguished pathologists, under the name of Gelatiniform Cancer. They differ, so far as I know, from all the descriptions which have been given of this latter affection, in being small and dispersed through all the organs of the body; whereas this disease is described, by the best pathologist, to be, in most cases, concentrated in one continuous mass. Whether these considerations would lead them to rank this disease as a variety of gelatiniform cancer, or as one of a different and anomalous character, I must leave them to decide.

"It was very curious to observe these tumours in all the various degrees of development, from the point of their deposition and formation to their attainment of a considerable magnitude. Whatever was their size, the same transparent granular appearance was always visible, there being no difference except in the size of the transparent granules. The opaque whitish substance was confined altogether to the system of lymphatic glands.

"Among so many varieties in form and stage of this affection, I was not without the hope of discovering some morbid changes, which might have been supposed

to have preceded the formation of the gelatiniform substance. But no anterior preliminary change in the state of the cellular, muscular, vascular, or any other texture could be discovered, either by the eye, or the microscope.

"Specimens of the disease from various parts of the body were preserved, and subjected to many subsequent examinations. Contrary to the opinion expressed by some authors in regard to gelatiniform tumours, all these tumours soon lost their transparency on immersion in alcohol, and presented the same yellowish-white appearance as the diseased lymphatic glands."

Division of the Spinal Marrow.—Recovery.—A very remarkable, perhaps unique, example of this, is recorded by Dr. ELI HURD, of Middleport, Niagara county, New York, in the *New York Journal of Med.*, (Sept., 1845.)

The subject of the case was a man who jumped from a wagon upon a piece of timber, the surface of which being wet, he slipped and fell upon his back and left side. On endeavouring to rise he found his lower extremities numb and powerless. He called for assistance, and when raised, a chisel, which was in his coat-pocket when he jumped, was found sticking in his back. An attempt was made to extract the instrument which resulted in pulling off the handle. Dr. Hurd was then called, and in a few minutes was on the spot. With the assistance of three or four men and after a prolonged and severe effort, Dr. H. succeeded in drawing out the chisel which was *five inches in length to the shoulder*, seven-eighths of an inch wide, and from a quarter of an inch at the shoulder tapering to less than one-eighth of an inch in thickness at the cutting extremity.

The wound was then dressed, and the patient carefully conveyed home. At the time of extracting the instrument, the patient saw "vivid flashes of light, which were apparently followed by total darkness." During the operation he was conscious of very little pain.

The wound made by the chisel was opposite the spinous process of the lower dorsal vertebra, on the left side. At its superior extremity it was half an inch from the spinous process, and one inch at its inferior extremity; so that a line drawn parallel to the spinous processes of the vertebrae, and three-fourths of an inch to the left, would have intersected it in the middle. The direction of the instrument was upwards, at an angle from the surface of twenty to twenty-five degrees, and to the right of about twelve degrees, penetrating the spinal column, and undoubtedly entirely dividing the cord. Perfect insensibility of the skin below the wound, with paralysis of the lower extremities, bladder and rectum, was the immediate consequence. The shock that the system received produced great prostration for some forty hours, when reaction took place, and was followed by fever for ten or twelve days. The external wound cicatrized in a few days, scarcely discharging a spoonful of pus. The urine was drawn off by means of the catheter for six days after the accident, when the bladder began to resume its functions, and two days after the instrument was discontinued. Cathartics failing to move the bowels during the same period of time, and for two or three days longer, dejections were procured by stimulating enemata. Returning sensibility occurred in the skin the fifth day, and an imperfect use of the limbs about the fifteenth.

The patient first commenced locomotion on his hands and knees, then by pushing a chair round, and afterwards by means of crutches, which he has been obliged to use ever since. Distortion of the feet and ankles commenced some weeks after his efforts to get about on crutches, and increased for several years thereafter; yet his general health continued good.

The treatment during the state of prostration was by diffusible stimulants, through the febrile stage by antiphlogistics; while friction, with stimulating liniments to the paralyzed parts, was used throughout both stages, and for months afterwards.

Sensibility of the skin and action in the inferior extremities returned very slowly; so much so, that four years and seven months after the accident above-mentioned, carelessly sitting or kneeling with his left knee nearer than usual to the hot fire, without feeling any pain, or being conscious of suffering, the skin and integuments over the knee-pan and on either side of it were so badly burned, that mortification and sloughing took place. This was so deep, that the cavity of the joint was opened and exposed to view. The patella was covered only by the

periosteum, and after a few days, as he was endeavouring to draw his leg up in bed, broke transversely across. The superior portion of the patella protruded so much from the wound in consequence of the retraction of the extensor muscles, that, after various unsuccessful attempts to reduce and keep it in place, it was removed by amputation. The knee was now much inflamed and swollen. The wound gaped horribly, and every symptom gave indication of a fatal issue. A fungous vegetation sprang up from every side of the wound, filled up the cavity, and formed a spongy protuberant mass above and around it. Hemorrhage followed every application of caustic that was made to check its exuberant growth, as well as compression, even the slightest touch. The miserable patient became extremely exhausted, and amputation of the diseased and crippled limb seemed the only alternative, and even that a doubtful one.

At this juncture, three weeks from the period of the burn, the wound was dressed with Singleton's Golden Ointment, under which a cure was gradually effected.

A large ugly-looking puckered cicatrix remains over and above the left portion of the joint. The inferior portion of the patella is drawn round upon the outside of the knee-joint. The leg is rotated outwards, and the heel thrown in so as to point to the hollow of the right foot. The toes are thrown out and drawn up towards the metatarsal bones, and the whole foot is drawn inwards, and flexed upon the tibia in such a manner as to make almost a right angle with the leg. There is also considerable deformity of the right foot and ankle, though less than of the left.

There is no curvature of the spine, nor has there been at any time. Nor is there any complaint whatever of the back. He can get into and out of a carriage, mount a horse from the ground without assistance, and ride off at any pace. He has been elected constable and collector of the town where he resides for a number of successive years, discharged the duties of his office acceptably to the public, and attends to many other kinds of business. He has married within two years, and has one child. In fact, he is, in every sense of the word, as well as he ever was, except his crippled condition.

Gastrotomy.—An interesting case in which this operation was performed, was read before the Tennessee State Medical Society by Dr. J. E. MANLOVE, and is published in the *Boston Med. and Surg. Journ.* (July 23, 1845.) The patient, a coloured boy, 17 years of age, was suffering when Dr. M. first saw him, 7th July, 1844, under some general uneasiness of the abdomen, and fever, and had been constipated for 12 or 15 days. He had taken epsom salts, castor oil and several enemata without effect. Bleeding *ad deliquiem animi*, calomel and opium, stimulating enemata, the introduction of flexible tubes as far as possible into the intestines, enemata with tart. antimony, &c., failed to produce an evacuation from the bowels. The patient's condition on the 10th July was as follows:—"Abdomen enormously distended; difficulty of breathing; extremities cold; pulse very feeble and quick; countenance anxious; no evacuation. Gastrotomy was considered the only possible means of even prolonging his life; and although the operation promised but little benefit, yet the certainty of death without it, justified us, in our estimation at least, in undertaking its performance. An incision was made in the median line, commences about two inches below the umbilicus, and extending down towards the pubis four or five inches. The peritoneum and bowel along the lower half of the incision had formed a most intimate adhesion, and in cutting through the former an opening of about one-fourth of an inch in extent was made into the latter. From the opening there proceeded large quantities of flatus and liquid feces, as well as the oil and turpentine, which had been taken. On further examination, it was discovered that the intestines were united to the peritoneum by extensive adhesions at various points within reach of the finger and probe. The wound was closed by sutures and adhesive straps, except the opening into the intestine. The amendment in all the symptoms in one hour was astonishing; the extremities became warm, the pulse slower and fuller, and during the morning he was able to fan himself, the weather being excessively warm. On the next day his appetite was good, and he continued to improve and to discharge the contents of the bowels through the artificial anus until the 17th

day after the operation, when the bowels acted naturally, the opening having nearly closed."

Six months before the boy's present illness, he had received an injury from the falling of a piece of timber on the abdomen, from which the adhesions discovered in the operation resulted. The boy was well nine months after the operation, and was exhibited at the meeting of the Society.

The reporter advocates the operations in similar cases, and in support of his views adduced the following case:

"Dr. Wilson, of this county, was called to attend, in conjunction with several others, a negro man, who was supposed to be labouring under intussusception. All remedies had been used to procure evacuation of the bowels which ingenuity could suggest, but in vain; and the patient was reduced to the last point of life. Gastrotomy was determined to be the only means of affording relief. It was performed by Dr. W., and the intestines drawn out of the cavity of the abdomen until the point of obstruction was arrived at. About one inch of the ileum was found to be invaginated; and the attempt to relieve the intussuscepted portion, discovered the fact that adhesions had been formed between the receiving and received parts of the intestine. The adhesions were dissected loose, and the bowels returned into the abdomen. Natural passages immediately took place, and the patient was rapidly restored to perfect health. It is not unreasonable to suppose the chances of recovery would have been much enhanced, had the operation been performed before the adhesions were established."

We much fear that such fortunate results are not likely to often follow in similar cases.

Ununited Fracture of Femur successfully treated by the Seton.—By CHARLES A. POPE, M. D., Prof. Anat. in Univ. of St. Louis. (*St. Louis Med. and Surg. Journ.*, July, 1845.) A man 26 years of age, had his right thigh fractured May 15th, in three places, by a horse, which he was riding, running against a tree. He was conveyed home, and Desault's apparatus applied to the limb, which was not bandaged. He remained in bed six weeks, at the end of which time, the fracture at the middle third of the thigh had not united. The limb was then bandaged, and the splints were reapplied. Extension and counter-extension were not now, as before, made use of, on account of the limb having been found longer than that of the opposite side. The splints and bandages were again removed on the 1st of August, and still there existed motion at the seat of fracture. The patient was then advised to get up, and to use his leg, having his thigh supported by a broad strong leathern belt. This was worn for several weeks without any improvement, as he could bear little or no weight on the limb, and was compelled in consequence to go on crutches. The patient now consulted two other surgeons, one of whom recommended pressure and rest, with bathing the limb in salt and water, and the other tight bandaging, giving direction at the same time, that he should use his limb as much as possible. He persevered for some weeks in this course, but experiencing no improvement, he had abandoned all hope of an amelioration of his condition.

In the following October, the patient came under Dr. P.'s care. At this time the right lower extremity was a little longer than the left. The right leg was also much smaller than its fellow,—the thigh somewhat curved, and presenting a convexity outwards. Irregular swellings, the callous tumours of ununited fractures could be felt along the bone for five or six inches below the trochanter major. Midway the thigh, there existed considerable motion, which was greatest, when the thigh was deviated outwards or forwards. Slight pain was experienced when such deviations were impressed upon the limb, and at the seat of the non-united fractures, the upper fragment projecting like a rounded point, could be discerned through the skin and muscles. From the position of the fragments so far as they could with difficulty be ascertained in a thick and fleshy limb, and from the circumstance of motion being greater in certain directions than in others, Dr. P. inferred the plane of fracture to have been oblique from above downwards, and from within outwards, and that fibro-ligamentous bands extending between the fragments, more or less partially united them.

The patient went about on crutches, with his limbs shrunken and hanging uselessly by the side of its fellow.

Frictions, electricity, and blisters were successively resorted to without success, and Dr. P. then determined to have recourse to the seton. Accordingly on the 5th of Feb., nearly nine months after the accident, he introduced, without a previous incision down to the seat of the preternatural joint, a long seton needle armed with French tape, through the thigh, and between the ends of the fragments. It soon produced some trouble. Large abscesses formed in the thigh and around the knee joint, which either discharged through the orifice, or required separate openings.

The tape was allowed to remain in five weeks, when the local inflammation and suppuration, and the constitutional irritation became so alarming, that it was deemed prudent by Dr. P.'s colleague, Dr. Prather, who kindly attended the case during Dr. P.'s absence from the city, to withdraw it, and substitute a smaller seton, which consisted of a single thread of saddler's silk. This was left in for eleven weeks longer, when Dr. P. withdrew it altogether. During the whole time, the limb was bandaged, splinted, and maintained in a state of as perfect rest and quietude as the dressing of the seton and abscesses would allow. All necessary attention was of course paid to the general health, which became greatly impaired, and remedies, with wine and a generous diet directed, calculated to allay constitutional irritation, and support the system under the profuse and wasting suppuration. After withdrawing the seton, the patient remained in bed eight weeks, during which time the most perfect rest was observed. He at length got up, and all discharges from the openings in the thigh soon after ceased. The limb was now found to be stiff, and there was an abundant callus thrown out around the point where motion had previously existed. There was also considerable stiffness of the knee-joint. From this time on, his limb became stronger and stronger, until he was enabled to lay aside his crutches and walk pretty well. He was in this respect improving daily, and consolidation seemed still to be going on, when on the 13th of November last, he was accidentally thrown from his cart, while driving along the uneven pavement on Main street; the wheel passing directly over the "same old fractured thigh, and broke it over again." The patient was a fifth time laid upon his bed, and the limb was splinted and kept at rest for five weeks. He now again mounted his crutches, and in twelve weeks more was able to walk without a cane. From that until the present time, this limb has been getting stronger and stronger; the knee, by use and frictions, has nearly regained its mobility, and the patient can bear his whole weight on the affected limb, such being now the size of the ossific deposit around the point of the two successive fractures, that it would seem less likely than any other part to yield to a fracturing cause. To his great delight the patient now walks very well, and limps but slightly, which is owing less to his femur than his knee, which, doubtless, in time, will regain its wonted functions.

Gun-shot Wound,—secondary hemorrhage,—ligature of both carotids at an interval of four and a half days. By JOHN ELLIS, M.D., of Grand Rapids, Michigan. (*New York Journ. of Med.*, Sept., 1845.)—A man, 21 years of age, was accidentally shot with a rifle, the ball from which "struck him near the centre, and immediately above the spine of the scapula of the left side, passing out, after making a flesh wound of about two inches and a half, towards his neck, and after about the same space it entered his neck over the centre and posterior edge of the sterno-cleido-mastoid muscle, passing up through the centre of his tongue, and out of it to the right of the mesian line, struck the lateral incisor, cuspidatus, and bicuspidatus of the right side, knocked them out, and the alveolar process, external to them; passed them through the upper lip, leaving a ragged opening through it." Dr. E., who saw him a few hours after the accident, brought the edges of the wound in his lip together with adhesive plaster and two or three sutures and dressed the other wounds with cold applications. The patient suffered but little pain but an entire inability to swallow, even liquids, which appeared to be owing to the injury and swelling of his tongue. At the end of three days, Dr. E. introduced a flexible catheter into the patient's oesophagus, and injected some water and nourishment; the next day the patient was able to swallow, with difficulty, some liquid, and soon afterwards regained his power of swallowing.

On the night of the seventh day, hemorrhage from the wound in the tongue

occurred, which was subdued by compression of the carotid of the left side and the orifices of the wound. The following night the hemorrhage recurred, and was with difficulty restrained by pressure, which caused the patient considerable pain. Considerable blood was lost. Dr. E., with the assistance of Dr. Platt, ligatured the left carotid artery below the omo-hyoideus muscle; "an operation attended with a good deal of difficulty, owing to the swollen state of the parts, the necessity of keeping up pressure, the bad position of the parts owing to the necessity of keeping the mouth in a certain position to prevent his being strangled by the blood, and the necessity of operating by candle light." No unpleasant symptoms followed the tightening of the ligature save a slight coldness on that side of his face and an occasional throbbing pain beneath the sternum, and in the direction of the ligatured vessel. The patient appeared to be doing well until the eleventh day from the accident, when he had a return of hemorrhage, which was readily subdued by pressing upon the right carotid and the two orifices of the wound. There was a slight pulsation in the left temporal artery, the first felt since the application of the ligature. There was a return of the hemorrhage during the night and several times the next forenoon. He could not endure pressure upon the right carotid for any length of time, and it was necessary to depend upon pressure upon the two orifices of the wound, which caused a good deal of pain, especially in the direction of the ninth pair of nerves. He was becoming very restless under the pressure, and was very anxious to have something done to relieve him. With the assistance of Drs. Platt and Shepherd, Dr. E. applied a ligature to the right carotid, four and one half days from the time the left was ligatured. The operation was attended with no difficulty; the internal jugular vein overlapped the artery to some extent; the descendens noni and par vagum were found in their place. Two ligatures were passed beneath the artery, and then tied, one of them over a cork applied to the vessel. For convenience, he was kept in the sitting posture during the operation; when the ligature was tightened no disagreeable effects followed; no fainting; no bad feeling about the head; and all the perceptible change was a slight pallor, and a cessation of pulsation in both temporal arteries, and of the hemorrhage. In the course of the next hour, his pulse increased in frequency from 95 to 140, but soon came down to 110. No difficulty of breathing. The first ligature was cut over the cork and removed, the other tied, and the wound dressed with sutures and adhesive plaster. For the first twenty-four hours the patient remained comfortable, but at the end of that time a hacking cough and difficulty of breathing came on, with pain in the chest and heaviness; pulse 120, rather full, for his reduced state. Blood was detracted by opening a vein in the arm, and by cupping and belladonna and tincture of aconite; under which treatment, the difficulty of breathing subsided; pulse came down in a few days to 80; neither of the wounds healed by first intention, but soon commenced discharging a healthy-looking pus. The ligature from the left carotid came away on the 17th day, and that from the right on the 14th from its application. The wound on the left side continued to discharge for several weeks, when the portion of the artery between the ligature and wound sloughed, and came away in three pieces at different times. The young man now enjoys comfortable health, and is attending to business. No perceptible pulsation can be felt in either temporal artery.

Oxalic Acid in the Rhubarb or Pie Plant.—A family of four persons, in this city, recently, after eating very freely of the leaves of the domestic rhubarb or pie plant, boiled and served as "greens," were all of them, shortly after, seized with severe vomiting. In one of the persons, it was followed by gastritis. The others recovered directly after the vomiting. We have occasionally seen notices in the newspapers of this plant producing noxious effects.—*Buffalo Medical Journal*, No. I.

In the second number of the same Journal, there is an analysis of the rhubarb plant, by Lieutenant Long, U.S. army, M.D. From this, it appears, that the small bundles in market, weighing about 1lb, contains 24 $\frac{1}{2}$ grs., or rather more than two scruples of oxalic acid. "The minimum fatal dose of the crystallized acid on record in standard works is half a drachm, but it would, doubtless, be unsafe to take a much smaller dose than this of the acid in a free state. Yet as the diluted acid is regarded and used as a safe refrigerant in fevers, and as a portion of it exists in the pie-plant in combination with lime and is therefore inert, it would seem

hardly probable that any deleterious effects would result from the use of the plant."

In one experiment, Dr. Long used the petioles or stalks, and in the other, both the stalk and the leaf, without any appreciable difference in the result.

These results are certainly curious, and we hope they will induce further inquiry. So far as the root of rhubarb has been examined, it would not seem to contain any free oxalic acid, but oxalate of lime varying according to the different localities producing it, from 11 to 35 or 40 per cent. (See Christison's Dispensatory. Art. *Rheum.*)

T. R. B.

Increased quickness of the Pulse, apparently resulting from Tumour of the thigh.—A curious case of this is reported by Dr. E. L. DUDLEY, in the *Western Lancet*, (July, 1845.) The patient was a black man of middle age, with a large tumour upon the inner half of the thigh. He had no pain in the limb, and the tumour might be freely handled without any inconvenience to him. There was nothing in the appearance or position of the tumour to justify the belief that it was of a malignant character, and yet the pulse of the patient, even after he had undergone a course of treatment for two months, was constantly at 140. The operation was finally performed by Professor Dudley, and a large tumour extracted, which involved three or four inches of sartorius muscle. It was remarkably heavy, and the greater portion of the interior converted into bone. In twenty-four hours after the removal of the tumour the pulse of the patient fell to ninety in the minute, and in a few days to the healthy standard.

The patient recovered rapidly without a single unfavourable symptom, and was, two years after the operation, one of the most active men upon his master's farm. If the tumour had been inflamed or the patient unusually irritable under nervous impressions, we might conjecture with some plausibility the cause of this unusual phenomenon. The fact that it was situated immediately over the femoral artery, and admitting that it might have pressed upon the vessel, (which it could not have done, in consequence of its superficial position, to an injurious extent,) throws no light upon the case. The general health of the patient seemed to be good from the first, and the rapidity with which the wound healed proved that he was in perfect health at the time when the operation was performed.

Cadaveric Lesions in Yellow Fever.—Dr. JOHN HARRISON, Prof. of Phys. and Path. in the Medical College of Louisiana, in an article, the publication of which is commenced in the *New Orleans Med. & Surg. Journ.*, (Sept. 1845,) gives the following as the result of his observations, made during thirteen years' practice in New Orleans, during ten of which he was connected with the Charity Hospital, as to the *post-mortem* appearances found in yellow fever. It is to be regretted that these results are not given in a more definite and precise form; still they are a useful contribution to our knowledge of the disease.

The Skin.—A few hours after death nothing is more common than to find all the lower or depending parts of the body in a state of congestion—literally black from accumulation of blood. And this is not confined to the external parts; we shall find the same thing at the base of the brain; in the depending portions of the intestines, and particularly of the ileum. We shall also find this congestion more or less in the lower portion of the lungs, and I believe it constitutes, in many cases, what is mistaken for inflammation of the stomach towards the cardiac orifice. As I have already observed, the tissues seem to be partly disorganized by the disease; they have lost, in a great degree, their natural elasticity; the capillary spaces are enlarged, and the blood settles down from the mere effect of gravity.

The Brain is sometimes congested with blood; at other times it contains a little water in the ventricles and under the arachnoid. The pia-mater is sometimes finely injected; the dura-mater is rarely affected, and, when so, presents only a few small sanguineous spots on its serous surface. In most cases, the brain presents no appreciable lesions whatever. The like may be said of the spinal marrow and sympathetic ganglia.

The Lungs are sometimes obviously congested with blood. They do not retract, as they usually do, when the sternum is removed. They are also, in parts, much discoloured. In one case, examined in 1839, a portion of the left lung, about the

size of a dollar, was found in a state of apoplexy—the blood was extravasated and coagulated. The mucous membrane lining the trachea and bronchia, is also, in many cases, finely injected or spotted with blood. In numerous cases—perhaps in a majority—the lungs present no lesion that we can detect.

The Heart is very rarely, if ever, affected. The endocardium is sometimes slightly discoloured, but I believe this is only met with in subjects that have been some hours dead, and appears to be occasioned by absorption of the colouring matter of the blood left in the cavities. Small blood-spots are also sometimes found on the endocardium, and seem to be analogous to the petechiae on the skin. We generally find coagula in the heart in this disease, but they contain more colouring matter, and are softer than those we meet with in cases of death from most other diseases.

The Liver.—I have never seen any lesion in this organ which could be attributed to the effects of the disease. There is no organ in the body which presents such various appearances as this; at times, being very dark; in other cases, presenting a pale yellow aspect. In the cases examined at the Charity Hospital, it is not unusual to meet with chronic affections of this organ, but as we meet with an equal number of cases at other seasons, it is plain they have nothing to do with yellow fever—either in cause or effect. Indeed, as I have heard it sensibly remarked, there is no organ in the body with which the disease may take so many liberties, without material injury to health, as the liver. We frequently find it in conditions which are evidently of long standing, and such as to produce astonishment that the individual could have lived without manifesting his disease by striking and unequivocal symptoms.

The liver sometimes contains less blood than we usually find in the viscera, and in those cases it is paler and drier than usual. At other times, however, it is engorged with blood, and bleeds freely when cut; but these appearances it is subject to in common with all the organs, and the existence of one or the other appears to depend much upon the condition of the patient at the time of the attack, and the treatment he has undergone. In cases in which the lancet has been used freely, we shall generally find a pale yellow liver.

The Gall-Bladder in most cases contains its usual quantity of bile, which is to all appearances healthy. Sometimes it is greatly inspissated; in other cases the bile is more mixed with mucus than usual. I have sometimes found the gall-bladder containing only a little glairy mucus: these cases are rare. The mucous coat of the organ is sometimes, like other mucous tissues, injected or spotted with blood. In most cases it is not affected.

The Spleen is usually sound. It is sometimes engorged with blood, and in consequence, is enlarged and softer.

The Pancreas.—I have never seen this organ diseased in yellow fever.

The Urinary Bladder is rarely changed in appearance. Its mucous secretions are sometimes increased in quantity, and in a few cases the mucous membrane is dotted with small points of blood.

The Kidneys sometimes contain a great deal of blood. When cut into, we can seldom find any appreciable lesion. In some cases, the mucous membrane of the pelvis and infundibulum is, like the mucous coat of the bladder, minutely spotted with blood.

The Stomach and Intestines.—In a great majority of cases, the stomach is finely injected with blood. Not only is the mucous membrane thus discoloured, and that, too, in cases examined almost immediately after death, but we find also abrasions of the tissue in pit-like holes and furrows. It is beyond all doubt that this engorgement existed before death. In some cases, the whole surface of the stomach is affected; in others, the effusion and injection are confined to the cardiac or pyloric portion. The sub-mucous cellular tissue is also generally injected. The duodenum, and a large portion of the other small intestines are frequently found in the same condition.

In some other cases, though these are far more rare, the stomach, duodenum, and other intestines, present us with an almost entire absence of appreciable lesions. Prying and curious eyes have found here and there a few slight red spots, and have convinced their owners that they detected thickening and softening of the mucous membrane. I confess that I have not been able to see this, and the

conviction has been forced upon me that in these cases we could not lay our finger on any lesion which would account for the foregoing phenomena, or the death of the patient. But, by these remarks, I do not intend to be understood as inferring that these organs have not been diseased. On the contrary, I believe that in all cases of death from yellow fever, the stomach suffers, and suffers most severely. All I contend for is, that we are not entitled, from the facts before us, to say that it has been inflamed—an inflammation in my creed is not synonymous with *disease*, but expressive merely of a particular species of morbid phenomena. Those who contend that the stomach must necessarily have been inflamed, reason, not from facts to theory, but from theory to facts. They are guilty of hypothetical, not inductive reasoning. The stomach has doubtless suffered, since all the organs in the body—every tissue—must, more or less, be altered in its constitution, after undergoing such violent morbid actions. But in the cases we now speak of, the stomach seems to have suffered not a whit more than the other organs.

As the stomach usually contains black vomit, it may be argued that the tissues have relieved themselves, by pouring the contents of their vessels into the cavity of the organ; but if this be true, how comes it that, in other cases, in which we also find the stomach full of black vomit, we meet with a mucous membrane literally engorged with blood?

The large intestines, and the lower portion of the small, are not so often found congested as the stomach and duodenum, yet such a condition is by no means rare.

Before leaving the stomach, it may be well to remark, that, in some cases, it presents a very singular aspect caused by artificial means. It is difficult to describe. The mucous tissue, when washed, has a sort of marbled appearance, with faint lines running here and there, and intersecting each other. This is owing to the acid solution of sulphate of quinine, administered in the latter stages of the disease. That such is the fact, has been proved by immersing a stomach not having this appearance in a solution of quinine.

A remarkable feature in yellow fever is, the frequent occurrence of intussusceptions of the small intestines. These were exceedingly common in autopsies made in 1839. The quantity of intestine invaginated sometimes exceeded a yard.

In certain cases we found Brunner's glands presenting a miliary aspect. Whether this was connected with the disease or not I do not know. In some cases of a typhoid type, in which there existed before death a low nervous delirium, we found, sometimes ulceration, and, at others, hypertrophy and softening of Peyer's glands. Ulceration sometimes occurs in Brunner's glands, but rarely, and, when it does take place, we generally have hemorrhage from them.

The mesenteric glands are sometimes considerably enlarged. This occurs generally in cases in which death occurred after the 7th or 8th day. I have also seen them much enlarged in cases treated on the mercurial plan.

The Blood.—This fluid does not present to us any strong evidence of those changes which we might expect after the system undergoing such violent actions. It has been said that it loses its coagulability. Whether such is not the fact in certain cases I will not undertake to say, but in a great majority it is certainly not true, for we find coagula in the heart, and blood taken from the larger vessels generally coagulates after a while. It is unquestionably true, however, that it requires a much longer time to coagulate than blood usually does, and that the coagulum is larger and softer. Blood drawn from the arm rarely, if ever, presents a buffy coat; nor have I ever seen it cupped.

The muscles, in many cases, are darker and drier than usual. The other parts of the body present nothing remarkable.

Empyema successfully treated by Operation.—Dr. W. C. SNEED, of Frankford, Ky., has given in *The Western Journal of Medicine and Surgery*, (May, 1845,) an elaborate report of a case of empyema, in which paracentesis was performed, and an astringent fluid injected into the pleural cavity, with a fortunate result. The subject of the case was a boy, 13 years of age, who was attacked with pleuro-pneumonia, on the 8th of March, 1844. By appropriate remedies the symptoms were subdued in ten days, and everything seemed to promise a speedy convalescence. On the 1st of April Dr. S. was again summoned to see the patient, and found him labouring under difficulty of breathing, hacking cough, pain in the left side, con-

siderable acceleration of pulse, and, in a few days, all the evidences of empyema of the left side appeared. On the 8th of April Dr. S. having drawn the skin upwards as tight as possible, made an incision $\frac{3}{4}$ of an inch long through it; between the sixth and seventh ribs as near the angle as the margin of the latissimus dorsi would permit; and then introduced the lancet into the cavity of the chest. Upon its withdrawal, pus followed in abundance. Between this period and the 1st of July a catheter was repeatedly introduced and pus drawn off. At the date last mentioned, the patient had much improved, the pus was less abundantly secreted, and more transparent, having now more the appearance of serum than pus. The absence of all inflammatory symptoms and the change in the character of the secretion, at this period, induced Dr. Sneed to believe much might be effected by the use of astringent injections into the pleural cavity. Accordingly he commenced injecting about half a pint of a weak decoction of oak bark into the cavity once a day, after having first drawn off the pus. The result was truly gratifying. From this time he improved rapidly; the secretion lost its fetor, and became almost serous in a few days. It continued to be secreted, however, until about the middle of August, when the amount became so small and serous that the injections were discontinued and the orifice allowed to close. The emphysema gradually subsided after the use of the injections were commenced and entirely disappeared before the orifice closed.

From the commencement of the patient's illness to the time of the first operation, about thirty days elapsed, and from the day of the operation to the closing of the orifice, about four months transpired. During this time the instrument was introduced upwards of one hundred times, and Dr. S. feels fully assured that not less than fifteen gallons of pus and serum were taken from the chest of the patient little sufferer.

Dr. S. reports on the 1st of April, 1845, that he saw the patient that day and found him in the enjoyment of good health. The heart is in its proper place, respiration can be heard through the whole of the left lung; and though the side is contracted, no inconvenience is felt from the diminution of the lung.

Subcutaneous Venous Erectile Tumour of cheek—Ligation of common Carotid Artery—Death from phlebitis with deposition of purulent matter between the membranes of the brain.
By ALFRED C. POST, M. D. (*New York Journal of Medicine*, Sept., 1845.)—An Irish labourer, 27 years of age, from birth had a small discoloured spot on his cheek without swelling, which about three years ago began to be prominent and continued to increase in size from that time until April, 1845, when he consulted Dr. Post. The tumour at this period involved nearly the whole extent of the right cheek, and projected externally and into the cavity of the mouth. The tumour was evidently formed of a congeries of dilated veins, some of which could be distinctly seen through the skin, and others through the mucous membrane. When the patient stooped and made any exertion, as in tying his shoe, the prominence of the tumour was greatly increased. The thickness of the tumour when distended was about two inches.

On the 12th of April Dr. Post, after consultation, applied a ligature to the carotid artery just above the omohyoideus muscle. The operation was borne without the slightest indication of suffering. The wound was dressed in the usual manner with sutures and adhesive plaster. The patient was directed to be kept quiet and to live on gruel.

For several days afterward the patient complained of soreness in the wound and difficulty of swallowing. On the 16th of April, the straps and sutures were removed; the edges of the wound gaped a little, and adhesive straps and lint spread with cerate were applied. The patient appeared comfortable. On the 22d, without any apparent cause, he had a fainting fit, with cold extremities and very feeble pulse, from which he revived under the use of stimulants. The patient after this did well, and the wound was healed, except a small space around the ligature, by the 29th. This morning he was attacked with chills followed by febrile excitement.

May 1st. Complains of soreness and stiffness in the right side of the neck, above and behind the wound: there is some swelling with tenderness in the same region. Pulse 100 and rather feeble: he was much prostrated: bowels rather confined. He was ordered ol. ricini; three leeches to the neck; wine-whey. 2d.

Soreness of neck somewhat relieved by the leeches: patient feels rather better: pulse 96 and feeble: skin cool: tongue less dry. Complains of soreness in the tumour of the cheek, which appears somewhat inflamed. 3d. General condition about as yesterday: tumour in the cheek a little more inflamed. A blister was ordered over the tumour: wine-whey and beef-tea continued. 5th. Patient feels much better, and sits up in bed: pulse 92 and has more force: tongue moist and moderately furred. There is considerable swelling at the upper part of the neck on the right side and behind the veins of the jaw, with some tenderness: the tumour of the cheek continues hard and tender, but less painful than before the application of the blister. 7th. Swelling and tenderness of the neck somewhat diminished: fluctuation is perceptible in the tumour of the cheek: it was opened with a lancet, which gave issue to a drachm or more of dark-coloured purulent matter. Some oozing of blood took place after the escape of the matter, which was arrested by introducing within the lips of the wound a pencil of argent. nitrat. Wine-whey and beef-tea continued.

During the nights of the 7th and 8th the patient was delirious; he gradually sank, and died on the 10th.

Autopsy.—The right internal jugular vein was thickened in its coats and adherent to the surrounding parts: when it was opened, it was found to be distended with purulent matter and shreds of fibrin. The inflammation of the vein extended from the base of the cranium down to the space just above its junction with the subclavian vein, where its cavity was entirely obliterated by adhesion of its opposite sides. No traces of inflammation were detected in any of the veins below. On laying open the congeries of veins constituting the tumour of the cheek, it was found to contain soft coagulated blood, but no pus. Four small white calculous concretions, or phlebolites, of a globular form, were found in it: they varied in size from the volume of half a pea to that of a large pin's head. On the left hemisphere of the cerebrum there was extensive effusion of concrete purulent matter between the arachnoid and the pia mater, along the course of the veins running over the anfractuosities, and in some places, extending between the convolutions. There was less extensive effusion of a similar character on the right hemisphere. A similar effusion was also observed on both surfaces at the cerebellum, and at the base of the cranium, between the arachnoid and the dura mater. A small portion of fibrin was also found in the right lateral sinus near its termination. No marks of inflammation or of suppuration were found in his lungs, liver or kidneys, or any of the articular cavities. The ligature had not come away from the artery during life; but it had become detached in laying out the corpse. The artery was entirely divided, and a pretty firm clot on each side of the division, obliterating nearly an inch of each portion of the vessel.

"The result of this case," Dr. Post observes, "was entirely unexpected and unusual. I am not aware that there is any case on record, in which the ligature of a large artery has been followed by inflammation of a corresponding vein, when the vein itself was not disturbed during the operation. In the present case, the sheath of the vessels was opened over the carotid artery, and the internal jugular vein was not exposed nor disturbed in any of its relations."

Remarkable Case of Volvulus and Strangulation of the Intestines within the Abdomen. By JAMES M. GORDON, M. D., of Lawrenceville, Ga. (*Southern Medical and Surgical Journal*, August, 1845.)—The subject of this case was a man 35 years of age, of vigorous health, who was attacked with the most excruciating pains in the abdomen, with partial remissions, attended with obstinate constipation, which resisted all means of relief, and the patient expired in intense agony thirteen days after the attack.

On *post-mortem* examination the ileum was found dark-red (almost black), which appearance extended through all the coats of the bowels and also to the mesentery. There was an intussusception of about an inch and a half in length, at about four inches above the termination of the ileum. So firmly had the coats of the intestine become agglutinated that they presented the appearance of a fleshy tumour, blocking up its entire caliber. It was also observed that the ileum had made a complete revolution upon itself, with the peritoneum as an axis, so as to strangulate a knuckle of intestine five inches in length. The first point of strangulation was immediately above the intussusception, and the second twelve inches

above the last. They were twisted around each other so as to form a knot which was with difficulty relieved after the morbid specimen had been removed from the body. The incarcerated noose of intestine presented an almost black colour, and was greatly distended with gas. About twenty inches of intestine were involved in the congestion. The points where the intestine passed around itself were of a dull-white colour, presenting a striking contrast with the surrounding parts.

On the mode of Operation, and Therapeutical application of Iodine and its Preparations. By THOMAS BARBOUR, M. D., Prof. of Obstetrics, &c., in Jackson Kemper College, St. Louis, (*Missouri Med. and Surg. Journal*, May, 1845.)—Dr. Barbour gives in this article the results of his experience with iodine and its preparations, and enumerates the various diseases in which he regards the remedy particularly valuable.

1. *Scrofula.* If there be an article entitled to the appellation of specific, Dr. B. thinks it is certainly iodine in ordinary scrofula, scrofulous ophthalmia and white swelling. He employs in these diseases the solution of iodine with hydriodate of potassa, with the ointment of the same, the syrup of hydriodate of iron; and in the last named disease the tincture of iodine applied over the affected joint.

2. *Chronic visceral inflammations, indurations and enlargements.* In chronic inflammation, induration and enlargement of the spleen and liver, Dr. B. considers the following combination of great value: R.—Proto-iodide of mercury 3*j*; socotrine aloes 3*ss*; extract of hyoscyamus 3*j*.—M. Make into 24 pills, of which one may be given at first every night, then every other night.

3. *Diseases of the urinary organs.* Dr. B. has witnessed the happiest effects from the use of proto-iodide of mercury in chronic nephritis and cystitis, and in enlargement of the prostate.

4. *Diseases of the uterus.* In chronic inflammation, with induration and enlargement of the uterus, Dr. B. considers iodine especially valuable. He usually prefers the proto-iodide of mercury in combination with extract of cicuta and aloes. He places great confidence in the above combination as a means of cure of dysmenorrhœa. In amenorrhœa he particularly recommends the following combination: R.—Proto-iodide of mercury 3*j*; socotrine aloes, exsiccated sulphate of iron, gum myrrh, of each 3*ss*; oil of savine gtt. xx.—M. Make into 24 pills, of which one may be given morning, noon, and night.

5. *Diseases of the chest.* Dr. B. has found iodine of great value in most of the chronic diseases of the chest, particularly in chronic bronchitis, asthma, incipient phthisis, pneumonia with hepatization, and chronic pleuritis with effusion. In chronic bronchitis he gives the solution of iodine with hydriodate of potassa in combination with an expectorant syrup made by boiling squill, seneka and lobelia, of each one ounce in half a gallon of water down to a pint; then straining, and adding to the infusion a pint of honey and again boiling down to a pint. In incipient phthisis he administers the aqueous solution of iodine, with tincture of digitalis, thrice daily; extract of cicuta at night, and nitric acid in infusion of wild cherry bark as a tonic; with counter-irritation with croton oil. In pneumonia, with hepatization, and pleuritis with effusion, he regards the following combination of great value: R.—Hydriodate of potassa, pulverized squill and extract of cicuta, of each 3*ss*; ipecac. gr. xv. Make into 20 pills, of which one should be given every four or six hours.

7. *Chronic Rheumatism.* In this he recommends the following combination as of great value. Hydriodate of potassa 3*i*; pulv. colchicum 3*j*; extract of stramonium 3*ss*. Make into 30 pills, of which one should be given three times a day.

8. *Syphilis.* In secondary syphilis Dr. B. believes that no remedy is comparable to the proto-iodide of mercury.

9. *Ozæna.* Dr. B. considers the iodine a valuable means of cure in this disagreeable affection. He gives the aqueous solution internally and injects the same diluted with 4 or 5 pints of water into the nasal passages.

10. *Chronic cutaneous diseases.* In these Dr. B. thinks iodine affords us a much better prospect of success than any other remedies.

In *tinea capitis* he places great confidence in the tincture of iodine as recommended by Dr. Graves.

In *indolent ulcers*, whether simple, scrofulous or syphilitic. Dr. B. prefers the tincture

of iodine in these affections, over which he conceives it to exert an undoubted controlling influence.

Finally, in *dropsy of the knee-joint* he extols the tincture of iodine as an application to the joint.

Case of Intussusception terminating favourably by the Discharge per Anum of Intestine, about sixteen inches in length.—A very remarkable case is reported by Dr. A. B. DAYTON, of Middleton Point, N. J., in the *New York Journal of Medicine*, (Sept., 1845,) purporting to be of this character. The subject of the case was a man 35 years of age, whose previous health had not been good, and who had had two or three severe attacks of colic, and who was seized with severe pain in the right lumbar region while attending to his ordinary business. Bleeding and a cathartic partially relieved him. Three days afterwards, when seen by Dr. D., he was suffering from pain in the right lumbar region with considerable tenderness of the abdomen generally: and from this time he continued to suffer at short intervals the most excruciating pains, except when under the influence of anodynes. He continued in this state for four weeks, during which time he became very much emaciated and death seemed inevitable; “when he voided per anum, a portion of intestine from twelve to sixteen inches in length, either in one or two pieces: it was in two pieces when I first saw it, but it may have been torn into two by persons who had been previously examining it. The part which I exhibited to the Society, and still have in my possession, is twelve inches long; the other part, which was lost during the cleaning and washing, was supposed, by those who saw it with myself, to be not less than four inches long; so that the whole would vary but little from sixteen inches.

“The portion passed is small intestine, having all its characteristics well marked. It is not, neither was it, as I believe, a continuous tube, in form of natural intestine, but is divided in its whole length; its edges being uneven, rough and jagged, its mucous surface in spots, dotted over, and in other places almost covered with small, dark, granular particles, being hard and resembling grains of sand, except in colour; there are also two or three patches, from half an inch to an inch in diameter, in which the entire coats of the intestine are changed into a dark mahogany-coloured substance, not dissimilar to thin turtle-shell either in hardness or appearance. A considerable part of the intestine presents a healthy aspect, except at its sloughed edges.”

What is most extraordinary, if there be no mistake as to the nature of the case, is that “the attack neither commenced with, nor was it during its whole course attended with vomiting, unless the emesis was the effect of medicine; neither was there obstinate constipation of the bowels, for cathartics operated freely and kindly, without unusual pain or difficulty, from the beginning to the termination of the disease.”

Statistics of the Medical Colleges of the United States.—We are enabled to make the following additions to the table published in our last number.

		Students.	Graduates.
Rush Medical College, Chicago, Il.	- - -	46	11
Medical College of the State of South Carolina	- - -	196	76
Willoughby University	- - -	126	29
Laporte University	- - -	45	6
Medical College of Louisiana	- - -	93	15

New Works.—Among the works recently published, we would invite attention to the sixth edition of the admirable Dispensatory of the United States by Profs. Wood and Bache: and also to the extremely useful and excellent “Dictionary of Terms used in Medicine,” by Mr. Hoblyn.

Works in Press.—We announce with pleasure that Messrs. Lea and Blanchard have in press the valuable work of Dr. Bird on Urinary Deposits, reviewed in the present No. of this Journal; and will very shortly have it ready for publication. They have also in press, Chelius’s System of Surgery, translated with additions, by South, and edited with further additions by Dr. Norris. The first part has already been issued, and the whole will be completed in a short time.

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